

275.28
N213

MARCH 1961

50 CENTS

COUNTY AGENT VO-AG TEACHER

THE LEADING MAGAZINE FOR AGRICULTURAL LEADERS AND ADVISORS

Where did the time go? • The broiler picture
Scanning the livestock & poultry scene



Joseph Weeks
Administrative Officer
U. S. Dept. of Agriculture
Washington 25, D.C. USDA



Serpasil Premix—the only feed additive that shields poultry against stress

SERPASIL® (reserpine) is the only available medicament that acts directly on the sympathetic nervous system.¹ Incorporated in SERPASIL Premix, this active agent actually shields birds against the causes of stress: heat, cold, crowding, debeaking, vaccination, caging, spraying.

In chicken feeds SERPASIL promotes adaptation to stressful conditions. Chickens remain calm, healthy . . . maintain high levels of feed efficiency and egg production during those periods of stress which cause heavy losses of eggs and birds.²⁻⁶

In turkey feeds SERPASIL shields the bird against aortic rupture⁷⁻¹⁰ by lowering blood pressure and buffering against stress. In flocks where an outbreak is in progress, 1 ppm. SERPASIL in the feed controls mortality within 2 days. In lower concentrations, it serves to prevent outbreaks. Poulets fed 0.2 ppm. SERPASIL from 5 weeks of age until marketing generally remain free of the disease.

Serpasil has been tested in repeated field trials throughout this country and Canada over a 2-year period. SERPASIL Premix literature is available to researchers, County Agents and Vo-Ag Teachers.

References: 1. Plummer, A., Gaunt, R., and Belloff, G.: CIBA Research Laboratories. 2. Couch, J. R.: First Conference on the Use of the Tranquillizing and Antihypertensive Agent SERPASIL in Animal and Poultry Production, College of Agriculture, Rutgers, The State University, New Brunswick, N. J., May 7, 1959. 3. Weiss, H. S.: *ibid.* 4. Burger, R. E.: *ibid.* 5. Gilbreath, J. C.: *ibid.* 6. Parker, E. L.: Second Conference on the Use of Reserpine in Poultry Production, The Institute of Agriculture, University of Minnesota, St. Paul, Minn., May 6, 1960. 7. Ringer, R. K.: *ibid.* 8. Waibel, P. E.: *ibid.* 9. Morrison, W. D.: *ibid.* 10. Carlson, C. W.: First Conference, etc.

CIBA PHARMACEUTICAL PRODUCTS INC.; ANIMAL HEALTH MARKETING DIVISION; BOX 313, SUMMIT, N. J.

IN CANADA, SERPASIL PREMIX IS MANUFACTURED BY CIBA COMPANY LIMITED, DORVAL, QUEBEC
DISTRIBUTED BY: THE RAY EWING COMPANY, PASADENA, CALIF./MERCK & CO., INC., CHEMICAL DIVISION, RAHWAY, N. J.
SERPASIL® Premix (reserpine premix CIBA) 2/2854FK



A GRASS-ROOTS STRONGBARN STORY FROM MISSOURI

"That extra lick it takes to nail Strongbarn means you're getting real strength"

Harold Bradley
Ethyl, Missouri



*"And I want that extra strength for my shed.
I want this building to last," Harold reported.*

"Strongbarn's a little harder to bend around corners, too . . . but again, that's because it's extra strong. It sure lives up to its name. If you happen to miss the nail while you're hammering, you don't knock a hole in that sheet like you might expect.

"And those Strongbarn sheets handled real good. I was surprised. Even in the wind we could handle them . . . wasn't dangerous at all.

"This building's a pretty good size, 42' x 60', and I intend to use it as an all-purpose barn. I plan to put in some stanchions and milk a few cows, have a storage

place for my hay, a few corn cribs, shelter for some of my machinery, and a stall for my horse. Folks kid me about my horse, but she's a fine animal and I like her.

"A lot of neighbors dropped by to see the barn and they all thought it was great. My cousin paid a visit and he really liked it. Said he was going to build one just like it," Harold stated.

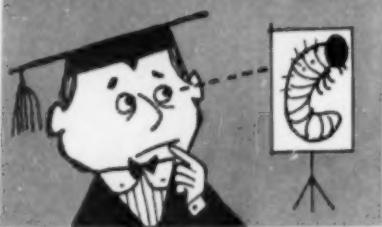
STRONGBARN

...twice as strong as ordinary corrugated steel roofing and siding of same gage and equal the strength of more expensive, heavier gage steel roofing and siding.



manufactured by GRANITE CITY STEEL CO., Granite City, Ill.

Want to be bug wise?



FREE VELSICOL EDUCATIONAL MATERIALS KEEP YOU IN THE KNOW! SEND FOR THEM...

just released! **SOIL INSECT FILM**

 This 17 minute, color-sound film, *Control of Soil Insects In Corn*, shows all the common soil pests of corn in big, close-up action. Covers details of damage and methods of control. Loaned free for specific dates or prints can be purchased at cost. Wonderful for group showings!

new! SOIL INSECT SLIDE SERIES



Completely revised series of 34 slides in full color plus narration script. Covers insects, damage and application equipment. Charts show soil insect control costs and profit comparisons. Available free on 2 week loan or may be purchased at cost.

now off the press!

SOIL INSECT CONTROL ON CORN



An authoritatively written 16 page booklet discussing soil insects that damage corn. Profusely illustrated with accurate full color illustrations. Packed with information on insect identification, life histories, geographical range, and type of damage. Includes various methods of application and dosages required for control of specific insects. It's detailed, up-to-date, informative . . . yours free of charge! Additional copies available.

a wealth of information!



LITERATURE ON INSECTS

There are many carefully prepared Velsicol publications that are yours for the asking. *Velsicol Insect Control Forum Guide*

Sheets are published at regular intervals with complete descriptions and control recommendations for insects that attack a variety of crops.

Join The Velsicol Insect Control Forum Today. No cost or obligation. Get your complete free kit of details on available visual aids and educational literature.

CAVAT-31



VELSICOL CHEMICAL CORPORATION
330 East Grand Avenue • Chicago 11, Ill.

COUNTY AGENT VO-AG TEACHER

MARCH 1961

Vol. 17 No. 3

THE LEADING MAGAZINE FOR AGRICULTURAL LEADERS

FEATURES

- 8 Broilers—Prostration or Panacea?
By Fred L. Olson
- 13 Why Don't Chain Stores Pay Premiums for Better Pork?
By V. James Rhodes and H. D. Naumann
- 19 How Do You Judge These Yorkshire Gilts?
- 20 County Agents Like "Idea Swapping"
- 29 Where Does the Time Go?
By Harold P. Zelko
- 32 Scanning the Livestock and Poultry Scene
- 36 "Insta-Hitch" Does the Job Fast—Without Pushing and Pulling

DEPARTMENTS

- 6 Sounding Board
- 10 Ag Leaders Washington *By John Harms*
- 12 Ag Leaders Speak Up
- 14 Late Research
- 24 Audio-Visual News and Views *By George F. Johnson*
- 38 Question of the Month
- 41 Farm Films
- 42 Vo-Ag News
- 43 What's Coming Up
- 45 New Ideas and Products
- 46 Booklet-Bulletin Reviews
- 48 County Agents, USA *By Vic Carothers*
- 50 In Summing Up *By Gordon L. Berg*

E. G. K. MEISTER, *Publisher*

GORDON L. BERG, *Editor*; R. T. MEISTER, *Editorial Director*

Associate Editors: PHYLLIS MARRON, DOROTHY KAPLE

Washington Editor: JOHN HARMS; Farm Mechanics Editor: HAROLD GULVIN

Audio-Visual Editors: GEORGE F. JOHNSON, ROBERT ABRAMS

EDWARD L. MEISTER, Director of Advertising

District Advertising Offices

CHICAGO: Al Zilenziger, 333 North Michigan Avenue. Phone S7-2128.

SAN FRANCISCO: E. S. Townsend, Townsend, Millsap & Co., 110 Sutter St. Phone SUter 1-7971.

NEW YORK: Rod Zilenziger, 415 Lexington Ave. Phone Murray Hill 7-1488.

LOS ANGELES: M. E. Millsap, Townsend, Millsap & Co., 159 S. Vermont Ave. DUnkirk 3-1211.

COUNTY AGENT AND VO-AG TEACHER is published monthly by American Fruit Grower Publishing Co., Willoughby, Ohio. E. G. K. Meister, Publisher and Chairman of the Board; Edward L. Meister, President; Richard T. Meister, General Manager; Gilbert Meister, Vice-President. Single current copies 50¢; copies over one year old \$1.00.

When changing your address, please send us old as well as new; send address label from your last copy; allow 6 weeks for the first copy to reach your new address.

Application for acceptance as controlled circulation publication pending at Ashland, Ohio.

Member Business



Publication Audit



COUNTY AGENT AND VO-AG TEACHER

They've found you can run a telephone to a man a lot cheaper than a man can run to a telephone

There's so much a farmer must know, so many people he must look to for services and advice—that the telephone has practically become his life line. Now many farmers are extending the reach of their telephone service with extensions in their outbuildings.



New York Dairymen Saves Two to Three Miles of Walking a Day Until about five years ago, Charles Buckenmeyer handled his 20 to 30 daily calls on the house telephone. He spent a good part of his morning hurrying to and from the house phone—a 200-yard round trip. Now Charlie's extension saves two to three miles of walking daily.

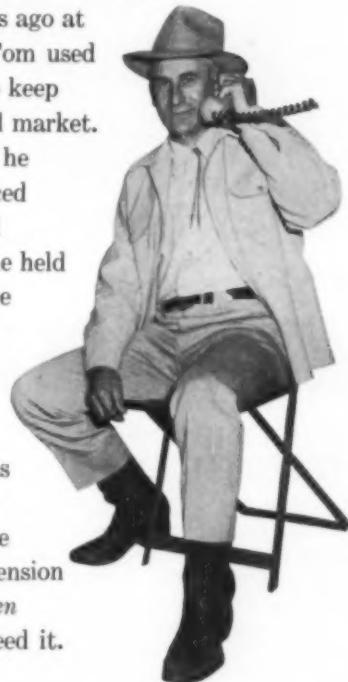


California Farmer Saves 250 Man-hours Arnold Collier has four year-round men to help him run his Dixon, California, farm. He raises grain, alfalfa and produce. Day to day work centers around the machine shed-shop. Arnold figures the

extension phone in this building saves him and his men well over 250 man-hours a year. The cost of the extension comes out about 8¢ for every man-hour it saves.

Extension Phone Helps Washington Sheepman Make an Extra \$2500 Tom Drumheller has an extension phone in the cookhouse on his sheep ranch near Ephrata, Washington.

A couple of years ago at shearing time, Tom used this telephone to keep track of the wool market. The information he gathered convinced him prices would strengthen. So, he held off on selling. The market went up 5¢ and Tom's 50,000 lbs. of wool brought an extra \$2500. This is a fine example of the importance of having an extension phone handy when and where you need it.

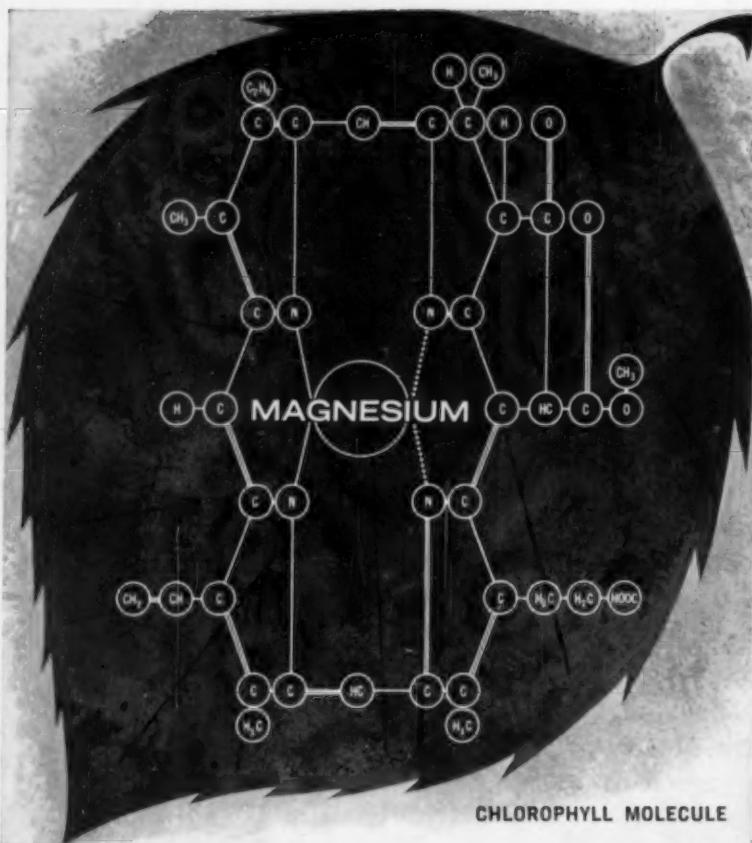


• • • •

Today the extension telephone is a farm tool that pays its way over and over by helping farmers make the most of their time and opportunities. It can do the same for you. Just call the folks at your telephone business office. They'll be glad to help.

BELL TELEPHONE SYSTEM





WHY

MAGNESIUM

IS CONSIDERED THE FOURTH
MAJOR PLANT FOOD ELEMENT

An atom of magnesium forms the heart of each molecule of chlorophyll! Without magnesium chlorophyll ceases to exist, plants die. Magnesium's role is so important that it is now often referred to as the fourth major plant food element. All crops need magnesium. In fact, more magnesium than phosphorus is needed for normal growth of tobacco, peanuts, alfalfa, clover and soybeans! And magnesium-rich Sul-Po-Mag (double sulphate of potash-magnesia) has produced remarkable crop yield increases with a corresponding increase in quality!

Recommendation: Choose Sul-Po-Mag for the most productive source of 100% water-soluble, fast-acting and readily available magnesium. Sul-Po-Mag may be obtained from fertilizer manufacturers either as an ingredient in mixed goods or for direct application.

Write for your free copy of "Magnesium" . . . a booklet which discusses magnesium and Sul-Po-Mag for specific crops.



AGRICULTURAL CHEMICALS DIVISION
INTERNATIONAL MINERALS & CHEMICAL CORPORATION
Administrative Center: Skokie, Illinois

SPM-18-01



This identifying
Seal of Approval
signifies assur-
ance of extra-
value fertilizer.



Sounding Board

There's not much farming going on in Nassau county, New York. But Howard H. Campbell is doing his "dangest" to stand out as the leading agricultural authority in Suburbia. And the last we heard this county agent was having things pretty much his own way.

Named president of the National Association of County Agricultural Agents at its 45th annual meeting in Miami Beach last November, Campbell gained another honor this year.

In the January 21 issue of *Chemical Week* the magazine hailed Campbell's talk at the Northeastern Weed Control Conference, held at the New Yorker hotel in New York City.

"For many of those at the meeting," the article related, "Campbell's comments on marketing aspects of weed control chemicals came as a worthwhile addition to what have usually been largely technical sessions."

Campbell pointed out the need of materials suitable for home gardeners to use on new lawns, materials that will 1) kill weed seeds and residual grass plants to a depth of at least 6 inches; 2) disappear in about one week; 3) be effective in lower soil temperatures to allow early spring seedlings, 4) be nontoxic to human beings and pets.

For established lawns he advocated development of colored herbicides to give the home gardener some indication of the areas already covered. He also asked that herbicide marketers give home users measuring instructions not only in dry ounces and pounds but also in tablespoons, cupfuls, pints and quarts.

County agents can be justifiably proud of their proxy! We also think he's a prime example of the kind of ag leader called for in summing up this issue.—EDITOR.

★ ★ ★ ★ ★

STATE GROUPS NAME OFFICERS

Missouri Association of County Agricultural Agents met recently on the University of Missouri campus and chose its officers for the coming year.

Robert Bridges, Rolla, was first elected president but did not accept because of ill health. Hensley Hall, Jefferson City, became president; John Douglas, Shelbyville, vice-president, and John Carr, Steelville, secretary-treasurer.

New officers of the **New Jersey** County Agents Association: Eric Peterson, Union County, president; Ray Battle, Gloucester County, vice president, and Harry Rotham, Cumberland County, secretary-treasurer.

When the **New Mexico** County Agents Association met at New Mexico State University, new officers were elected. Jim Gilstrap became president; Al W. Woodburn, second vice president, and Paul Trujillo, secretary-treasurer.

3 ways to cut hog feeding costs...all from PASTURE

In spite of the excitement over confinement feeding, one fact stands out clearly: Many farmers can still market hogs from pasture at less cost than from drylot.

Here are three reasons why:

1. Pasture replaces a good share of the protein supplement needed by drylot hogs.
2. Clean ground checks carry-over disease and parasites, often hazards on drylot.
3. Feeding on pasture steps up rate of gain.

Drylot feeding was compared with feeding hogs on 4 different pastures in Ohio experiments. Pigs from each pasture produced 100 pounds of pork at less cost than those on drylot.

Each set of pasture hogs went to market ahead of the drylot group. The pace-setting lot was on the auction block 14 days ahead of the drylot hogs.

When many producers plan

pasture for hogs, they figure any forage will do. Instead, hogs need good pasture, one that is high in protein and minerals. Just as with any other livestock, maximum profits from pasture feeding result from pasture tailored to the animals that use it.

Let us send you our new, free book, Pasture—How to Reduce Feed Costs. This pamphlet presents many cost-cutting facts, not only about hogs but other livestock too. It tells how to improve pastures. How to manage them for the most forage. What recommended forage varieties there are for every section of the country. How to stretch the pasture season.

These and many other subjects make the book valuable to you. Use it for reference, class discussion or talks. The book is authoritative, based on research results from across the nation. Why not send for your copy today?

**Keystone Steel & Wire Company, Dept. CA-31
Peoria 7, Illinois**

Please send my free copy of the new book,
Pasture—How to Reduce Feed Costs.

Name _____

Position _____

Address _____

City _____ State _____



RED BRAND® and PASTURE

*a powerful
cost-cutting
combination*

Good pasture lowers the cost of livestock production. And Red Brand Fence reduces costs by lasting years longer than ordinary fence. Only Red Brand is Galvannealed,® an exclusive Keystone process that fuses zinc deep into the wire. It licks rust for years of extra life. Red Brand goes up fast and easy, too. Stays tight without restretching. You can always tell it by the red top wire. You also know extra value when you see the bright red tops of Red Top® Steel Posts and the red barbs of Galvannealed Red Brand Barbed Wire. Use all three for the best fence combination.

**KEYSTONE STEEL
& WIRE COMPANY**
Peoria 7, Illinois

Red Brand Fence • Red Brand Barbed
Wire • Red Top Steel Posts • Keystone®
Poultry Netting • Baler Wire • Gates • Nails

BROILERS

Prostration

By FRED L. OLSON

BROILERS have made a hit—with both the consumer and the feed supplier. Producing meat for the American table is a very competitive business and broilers have made greater inroads on this market in the last ten years than any other commodity.

Retail prices of other meats have increased far more than have broiler prices. In fact, in constant dollars or deflated prices, broiler retail prices have actually declined. With the 1935-39 retail price of each meat equaling 100, the deflated retail price of beef in 1959 was

141.1. For pork it was 117.7 but for chicken it was only 65.7.

The consumer has been very enthusiastic for the ample supply of broiler meat at reasonable prices as evidenced by the yearly consumption per capita increasing from two pounds in 1940 to 23.5 pounds in 1959. However, the amount of broiler meat that will be consumed at a given price depends also on the quantity of other meat available.

Herein lies part of the problem for broiler producers in 1959. Larger quantities of broilers were available along with larger quantities of pork. This re-

sulted in lower prices for both broilers and pork.

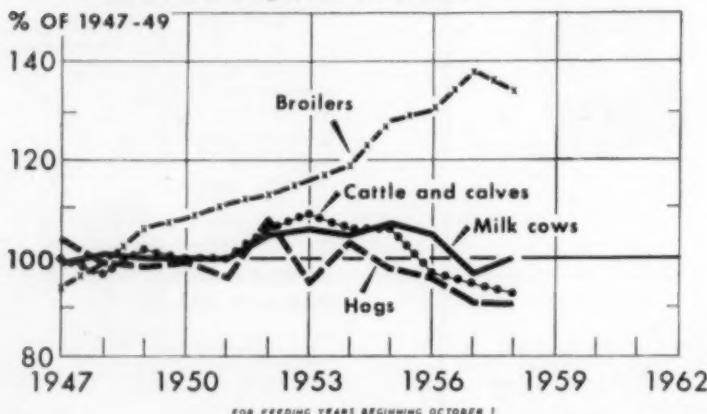
IMPROVED TECHNOLOGY

There has been considerable discussion of the impact of technological advance in agriculture. With the exception of broilers, most of this technological improvement has been in crops. In the feed conversion area of agriculture, broilers have made greater use of technological improvements than any other class of livestock or fowl.

In 1940 one hundred pounds of live broilers were produced with 489 feed units (the amount of feed equal to the value of one pound of corn). In 1957 this had dropped to 295 feed units. From 1947-49 to 1958 the production of broilers produced per unit of feed increased 34 per cent. During the same period of time the production of milk per unit of feed remained constant and the production of cattle and calves and hogs decreased slightly.

In a dynamic economy it is very easy to find some firms making excess profits at the same time that other firms are sustaining losses. This is the case in the broiler industry. A firm producing broilers five years ago, with the best techniques possible at that time was making a profit. The same firm today, using the same techniques as it did five years ago, probably is losing money. This is because other firms in the meantime have adopted further improved practices. With these further improved techniques, excess returns would have

Output Per Unit of Feed Changes Little for Hogs, Cattle, Milk



BIERS

or Panacea?

existed for these latter firms thus encouraging production and lowering prices until the excess returns are eliminated.

This leaves the former producers with losses and forces them to adopt the improved techniques if they want to continue in the production of broilers.

FIXED AND VARIABLE COSTS

There may be occasions when prices are abnormally low due to unforeseen changes in demand or supply of competing products. How well equipped is a firm to handle these short run losses?

This depends on the cost structure of the firm. The costs of any firm can be separated into two parts: 1) fixed costs and 2) variable costs. Fixed costs are those costs that do not vary with output such as the cost of buildings and equipment and the possible cost of management. Variable costs are those costs that vary with the quantity of production. This would include the cost of feed, the baby chicks, fuel and possibly some of the labor.

A firm can handle losses in the short run if the *variable* costs are covered. If the firm is to continue in production, the *fixed* costs have been or will be covered at other times when prices were or will be higher.

Just what is the relationship of variable costs to fixed costs in a broiler producing firm? This varies between firms and has changed from year to year. Considering feed as the only variable cost, variable costs amounted to over two-

thirds of the gross returns from broilers in the early 1950's. Since that time, feed costs have become an increasing proportion of the gross returns, being 72 per cent in 1957, 75 per cent in 1958, and 89 percent in 1959. This year, however, the feed costs will make up a smaller percentage of gross returns than last year.

Since the variable costs are such a high proportion of total costs, even a small variation in prices means that at times variable costs are not covered.

INTEGRATION AND PRICE RISK

How does integration fit into this situation? Let us suppose, for discussion purposes, the total costs of an integrated and a non-integrated broiler production process are the same. The difference between the two production organizations lies in the proportion of fixed and variable costs. The proportion of variable costs is higher in the non-integrated production process.

In a non-integrated broiler producing firm, all of the feed and baby chick cost would be variable costs. If the feed supply firm were integrated with the broiler production firm, the total cost of the mixed feed delivered to the farm would not be a variable cost. The cost of feed ingredients would be a variable cost. The costs of feed storage, mixing facilities and distribution facilities would be fixed costs and not part of variable costs as they are for a non-integrated firm.

If the baby chick supplier were integrated with the broiler raiser, the total cost of the baby chick would no longer be all variable costs. The cost of the laying house and the laying flock would be fixed costs.

If the integration took place on the processing end a similar situation would occur.

Thus, an integrated "firm" has much greater defenses against price variation than a non-integrated firm and can survive greater price fluctuations. In other words, low prices that may cause foreclosure of farms in a specific process in a non-integrated industry would not cause foreclosure in an integrated industry. The risk to the former growers under an integrated "firm" would depend on their bargaining power. However, this does not mean that management can be of inferior quality. The management has to be of better quality because the firm is large and the management continually needs to keep the firm organized for best production.

The broiler industry has applied improved technology faster than any other feed conversion industry. The application of this improved technology has been made by integrated firms that are better able to weather price variation that may appear. The consumer has benefited by having greater quantities of poultry meat available at lower prices.

Fred L. Olson is extension economist, University of Nebraska, Lincoln.



ag leaders washington

By JOHN HARMS

Latest word from the Capitol—Plans are in the making to expand the role of the county agent and vo-ag teacher

VOCATIONAL EDUCATION will get a big boost from the new Administration and the new Department of Health, Education and Welfare. Budgets will increase and so will Federal interest in the new session of Congress and the years ahead.

This is a switch from the efforts of top-level Government leadership in recent years to cut off all aid altogether and let the States do the whole job. All the while, the same leadership complained of the lack of skilled recruits in all fields, including that of agriculture. The new leaders have not had time yet to introduce a new budget or supplement the old one. But the significant thing is that they are working on plans to INCREASE the role of the county agent and the vo-ag teacher as well as the function of the vocational teacher in all other fields.

This does not mean Government will take over education in any respect. The new philosophy simply calls for greater participation by Government in supplying the tools necessary to do the job.

More money will be spent because: 1) Many people, even those who have been loudest in attacking the government role in education, are complaining about the shortage of vocational teachers, 2) both teacher and county agent (as local agricultural adviser) roles in defense (Cold War—Food For Peace) will be more recognized, 3) State systems of education have not been able to move fast enough without some assurance that new programs inaugurated are wanted, and 4) Cost of expanding the vocational education role is inexpensive compared to billions spent on what the new administration called in part "space frills."

A SWITCH in top-level policy thinking means a bigger field for the county agent and vo-ag teacher as now planned. The new Secretary of Agriculture and officials have chosen a direction in which they want to go which calls for recognition of agriculture as agriculture. This means regarding agriculture as something the U. S. needs and will have to keep prosperous— instead of a "problem" which is perennially at the crossroads.

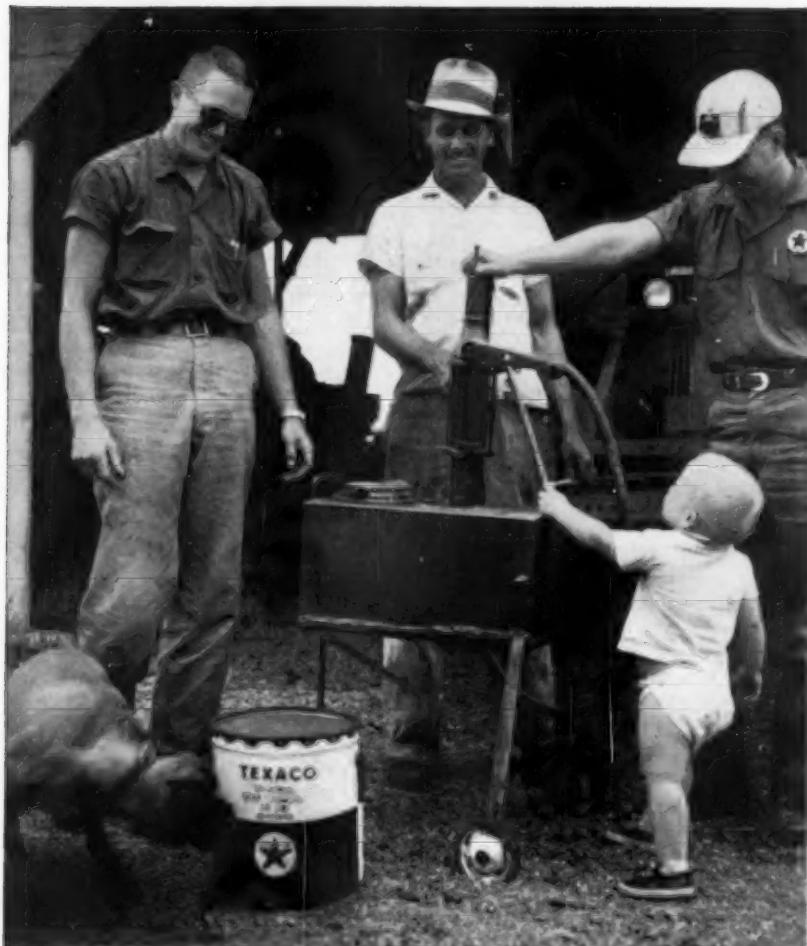
THE BIG JOB for the county agent and teacher is to sell and educate the general public on agriculture. The idea of the new direction for agriculture is to "de-educate" the public away from the image of agriculture as big, wasteful producer of farm surpluses, feeder at the public trough, and greedy ne'er-do-well. Officials are calling for an end to public speaking tours at taxpayer's expense, designed to present this type image of agriculture to the public.

This means a big agricultural public relations program. Plans in the making call for the USDA, land grant colleges, and other public agencies to take the steps necessary to provide the public with information that will enable it to see the true economic position of agriculture. Farm organizations, large numbers of which already favor such a program, will be called on to cooperate in the effort. USDA would lead in the program at the federal level. At the educational level, the vo-ag teacher might lead. At the local level, the county agent would include in his communications activities the function of liaison with the public on farm matters as well as with the farmer. Among those farm groups who recognize the need for a strong public relations program for agriculture, the middle-of-the road National Grange in its announcement of legislative policy for this year urges "that the U. S. Department of Agriculture immediately take steps to explain effectively to the public the manner in which benefits of its services accrue to all citizens." (our underscoring)

THE FIRST STEP by the new administration in its plan to present agriculture in a more realistic light has been taken. The P.L. 480 programs, up to now called in the public press "the big billion dollar farm surplus disposal program," has officially been named the Food for Peace Program. Official bookkeeping will no longer list the costs as farm program liabilities or subsidies to the farmer. The activities of both State Department and the

(Continued on page 40)

PORTABLE GREASE PUMP BUILT IN TWO HOURS!



A portable transmission grease pump was needed on the 1,100-acre farm operated by Parker Mehrle, his brother Robert, and Julian Boyd, near Caruthersville, Mo. In less than two hours they built the apparatus shown here—using an old oil pump, some strap iron and wheels from a discarded toy wagon.

Texaco Products have been used for many years to service this farm's equipment, which includes 8 tractors, 2 cotton pickers and a combine. Texaco Universal Gear Lubricant EP is preferred because it best protects gears against wear and scuffing. Also Marfak lubricant, which forms a tough collar around open bearings, sealing out dirt and moisture. Marfak won't wash off, dry out, cake up or melt down.

Like farmers everywhere, they've found that *it pays to farm with Texaco Products.*

SHOWN IN PHOTO (left to right) are Parker Mehrle, foreman William Risner, and Hubert Dunanant, drivesalesman for Texaco Distributor J. T. Ahern, Pemiscot Oil Co. Young Boyd and the dog are interested observers!



HAVOLINE IS HIS CHOICE!

Leo Gislain, farmer near Wellman, Iowa, uses Advanced Custom-Made Havoline Motor Oil exclusively for his equipment. Havoline's exclusive combination of detergent additives prevents harmful engine deposits and wear. Engines deliver full drawbar power, and more fuel mileage. Mr. Gislain has used Texaco Products for 23 years. Here he is

getting a neighborly, on-time delivery from Texaco Distributor K. P. Griggs, Wellman Oil Co.



BUY THE BEST..BUY TEXACO

TUNE IN: TEXACO HUNTLEY-BRINKLEY REPORT, MONDAY THROUGH FRIDAY, NBC-TV. ALSO—METROPOLITAN OPERA RADIO BROADCASTS ON SATURDAYS

QUICK START!



FAST FINISH

Quick-starting, easy-handling McCulloch chain saws bring any woodcutting chore to a quick finish. That's why loggers, pulp cutters, farmers, and ranchers buy more McCullochs than any other brand.

Send for free literature showing the many uses of a McCulloch for farm, forest, home or camp. Write McCulloch Corporation, 6101 W. Century Blvd., Los Angeles 45, Calif., Dept. CA-5

Seven new models available now

ONE / 41 Direct-drive

- Top value, top power • Weighs only 17 lb.
- New Super Pintail® Chain • Easy-reach oiler control • Compact body styling • Weather-proofed ignition

WEIGHT INDICATED EXCLUDES BAR AND CHAIN.



\$149.95
only
with full 16" bar

NO. 1 IN WORLD SALES

McCULLOCH
CHAIN SAWS

50204

ag leaders speak up

LET'S GET PERSONAL!

In your December issue you published the article "Who Reaches Farmers Most Effectively?" Is not the title misleading? The study shows the number of farmers reached but I don't believe the study included any measure of effectiveness. Is the title to the article an editorial privilege rather than the author's findings?

FRANK ANTHONY

*Agricultural Education Department
Pennsylvania State University
University Park, Pa.*

Knowing you, Frank, we could argue the points you have raised until the cows come home. I feel I ought to take the last one first. The title is the privilege of both the author and the editor. Sometimes we use the original title, but generally we select a short title with the maximum "oomph." I see this one made you sit up and take notice. I certainly don't think the title is misleading at all, but we prefer to let the reader be the judge! How do you MEASURE effectiveness? It could be argued that vo-ag teachers reached farmers more effectively in having more personal contacts. How did county agents KNOW that their newsletters and bulletins were being read? If you would go back and read the article again, you'd find that the authors said "personal influence will CONVINCE a farmer to adopt new practices." As for the two types of communications, personal and mass, I'll take the former every time. County agents, in some cases, are getting too far away from the farm. Naturally, you're concerned about the vo-ag teacher. From the findings of this study, I'd say he's headed in the right direction.—EDITOR.

LIP SERVICE—NO. 1 EVIL

I have just read your editorial "In Summing Up" in the November issue of COUNTY AGENT AND VO-AG TEACHER. May I have permission to reproduce this excellent editorial for use with my Ag freshman class? I will probably use it for my upperdivision classes also this year.

We have an Agricultural Business major here at Colorado State University in our Economics Department which attracts many students who wish to work in "agri-industry" or ag related firms. They are required to take about equal credits in technical agriculture, business subjects and agricultural economics with somewhat less in general economics. Our requirements in communication courses are inadequate for a well rounded education.

In fact, one of my advisees has returned for a year of Journalism courses after graduating in Agricultural Business last June. We had scheduled the basic courses (including Logic) as electives—thus he will have another degree by next June.

I hope your editorial will "wake up" the college staffs in Vocational Agriculture as well as the Deans and curriculum committees. It has been a frustrating experience obtain-

ing support for "agribusiness" in the Agricultural Colleges. Lip service we get, but active interest and cooperation is often inadequate.

The article by Anderson on "Market Know-How" was also quite interesting and gave me some ideas to apply in my classes in Agricultural Marketing and Agricultural Prices. This latter class is somewhat difficult to teach, but ten laboratory exercises per quarter term are a help.

C. RICHARD CREEK

*Assoc. Professor
Dept. of Econ. & Soc.
Colorado State University
Ft. Collins, Colorado*

AUDIO-VISUAL HELP WANTED

Some of our staff have become quite interested in the use of synchronized tape recorder-slide projector presentations as a teaching device.

Thought perhaps Bob Abrams could provide some leads as to what type of equipment is currently on the market . . . I'd be most interested in a list of companies which either manufacture or distribute such equipment.

We have a concern here in Michigan that is experimenting with such a device and is in fact following the suggestions of one of our specialists in the development of such equipment keeping in mind "ag" leaders as a specific market. I am quite sure that a number of companies already have such equipment which has met with certain successes.

Any help you can channel to me will be appreciated.

HOWARD L. MILLER

*Assistant Extension Editor
Michigan State University
East Lansing, Michigan*

Glad to help you on this, Howard. Our editors are always anxious to see new audio-visual techniques in use by agricultural leaders.—EDITOR.

In the November issue of COUNTY AGENT AND VO-AG TEACHER, there was an article by J. Aubrey Smith on "3-D in Audio-Visals" which I thought was very good. Another teacher and I are preparing a book on display and would like to contact this person to get some ideas for displays in the field of vocational agriculture. I wrote to him, but my letter was returned because I evidently used the wrong address. Could you supply me with the correct address?

Could you also supply me with the addresses of your audio-visual editors, George F. Johnson and Robert Abrams?

(Mrs.) THADYS J. DEWAR
*East Carolina College
Greenville, N. C.*

J. Aubrey Smith is audio-visual specialist for the Extension Service, College of Agriculture, University of Georgia, Athens. Letters to the other gentlemen can be addressed to this magazine.—EDITOR.

By V. JAMES RHODES
and H. D. NAUMANN

It is time agricultural leaders asked themselves: "How can we help producers get the ball rolling toward obtaining price premiums for better pork?"

It has long been hoped that pork cuts from meat-type hogs would be merchandised by supermarkets at premium prices. Such action would definitely increase the present low premiums paid producers for meaty, well-muscled hogs.

So we want farmers to get a better break—what can we do about it?

Well, University of Missouri meat technologists and agricultural economists recently tackled this question with a large sales experiment with "lean" and "regular" pork cuts. For eight consecutive weeks in fourteen Kansas City supermarkets, we measured the sales of rib end loin roasts, ham shank portions and center ham slices.

The products were pre-sorted on the basis of picture standards. The "lean" ham portions and centers had a much smaller internal kernel of fat and the "lean" loin roasts had much less seam fat than the "regular" cuts. In other words, the "lean" cuts had much less internal fat than the "regular," but they had the same amount of outside fat because they were carefully trimmed alike. Cuts were displayed side by side under *normal supermarket conditions*.

The results? The "lean" cuts outsold the "regular." The table shows the "lean" to "regular" sales.

MINIMUM PRICE PREMIUM

The "lean" to "regular" ratios were larger in dollars than in pounds because about one-half of the sales were at a 4 cents a pound premium on the "lean" while the other sales were at the same price. (Actually, a special experimental design determined which stores had equal or premium prices at various times.) The "lean" cuts were labelled like the "regular" cuts when priced the same. The "lean" cuts had a small, extra label, "Selected Meat Type Pork," when priced at a 4 cent premium.

A price premium of 4 cents a pound was thought to be enough to pay the retailer and packer for their extra sorting labor and extra display space and leave just a little for the producer. In other words, 4 cents was a bare minimum from the farmer's point of view as any smaller differential wouldn't give him much extra *immediate* returns. Of course, just selling good lean product with or without a premium will probably help the long run hog market and thus help hog producers in the long run.

The price premium on the "lean" affected sales. When there was a 4 cent premium on ham portions, "lean" sales were 52 per cent of the total number

Why don't

CHAIN STORES

pay premiums for better pork?

Comparing Sales of "Lean" and "Regular" Pork

	No. of Pounds		Retail Sales in \$	
	"Lean"	"Regular"	"Lean"	"Regular"
Loin Roasts	2,692	2,177	\$ 1,160	\$ 910
Shank Portions	18,072	14,228	8,960	6,690
Center Ham Slices	3,490	3,244	3,520	3,210
Totals	24,254	19,649	\$13,640	\$10,810

sold as contrasted with 60 per cent of total sales at equal prices. At a 4 cent premium, "lean" loin roasts sold 54 per cent of total compared to 58 per cent at equal prices. However, "lean" ham slices were 52 per cent of total sales poundage with and without a price premium. Since regular slices sold at 99 cents per pound, the presence or absence of the 4 cent differential was rather insignificant. Loin roasts and ham shank portions usually sold at 39 and 49 cents, respectively, so that the 4 cent differential made a larger difference.

How aware were consumers of differences in these cuts? We watched a sample of customers at the cases, and concluded that three out of four purchasers took a pretty good look at both lean and regular packages before deciding which to take.

Can retailers obtain a premium price for meaty pork cuts? These fourteen supermarkets did for eight weeks with three cuts! However, it is significant that the cooperating chain did not continue the procedure after our test. Perhaps the chain feared supply problems, or perhaps the premium didn't look large enough.

REAL EFFORT IS NEEDED

Whatever the reasons, we must face the fact that retailers generally are not leading out with real efforts to merchandise lean pork. Researchers of public agencies (e.g., Pennsylvania, Illinois, Indiana and Missouri) have done about all they can do with short sales experiments. It appears to be time for some of our retail chains to become more concerned about the welfare of the hog industry. Retailers are the only agency with the facilities for long time, realistic experimentation with various tech-

niques of merchandising lean pork.

If the present market structure cannot, or will not, develop the apparent market for meaty pork, then some quality incentive program may be desirable. An incentive premium of \$1.50 per "quality hog" or per "quality carcass," when added to the premiums being paid already by buyers, would give producers the *assurance* of price premiums for quality hogs.

These quality incentives might be set up for a period of, say five years, and then discontinued. Enough meaty pork would be produced to enable retailers and consumers to learn of its advantages. In fact, a sizable transformation in the quality composition of the U. S. hog supply could be achieved. It is difficult to believe that the market system and the hog industry would allow its improved quality to deteriorate after the quality incentive program was terminated.

Funds for paying the incentive might be obtained through an industry check-off or from government sources. Total costs would be very small in relation to the potential benefits to the hog industry.

We are *not* suggesting any sort of price support program or compensatory payments or pork purchasing program. We are suggesting an incentive program somewhat similar to the wool incentive program.

We hope that retailers can and will merchandise meaty hogs without special producer or government programs. However, we need to be aware that retailers may not do it. There's little evidence to suggest that many retailers will do anything very quickly.

V. James Rhodes and H. D. Naumann are agricultural economists, University of Missouri.

late research

- *New methods are being used to pinpoint dairy herds affected with brucellosis*
- *A unique sandwich—insulation between concrete layers—is under study*
- *Calves going out to grass four to seven days after birth are thriving in England*

What's the best temperature for egg production? Results of research at the USDA research center at Beltsville, Md., say that a temperature range from 45 to 65 degrees is best for egg production and feed efficiency. When the laying house gets too cold, egg production slumps and more feed is consumed for the amount of eggs produced.

More tender, juicy lamb chops and roasts with better texture and eating qualities may be possible through the feeding of dehydrated alfalfa with a high estrogenic content, according to recent lamb feeding tests at Oregon State College, Corvallis. Lambs were fed $\frac{1}{4}$ " pellets containing 65 per cent dehydrated alfalfa meal, 25 per cent ground barley and 10 per cent cane molasses. Estrogen potency of meals used in the two pellets was 119 and 22 mg. coumestrol/Kg. Both mixes were palatable and intakes were considered satisfactory. The "high estrogen" pellet improved growth rate of wether lambs but decreased growth rate of ewe lambs. Tenderness, juiciness, and texture in lambs fed the "high estrogen" meal was considerably improved.

Heart disease in pigs, being studied at Iowa State, may give a clue to man's malady. Dr. Bernard H. Skold, veterinary medicine researcher, is trying to obtain some data about fatty deposits which may form around large blood vessels of the heart and interfere with circulation of blood in animals as well as humans. Dr. Skold says if hogs show lesions comparable to arteriosclerotic lesions in humans, the veterinary profession may be in a position to contribute to medical research.

Better methods for pinpointing dairy herds affected with brucellosis are resulting in big savings of time and labor in the state-USDA effort to eradicate this disease, according to Veterinarian O. J. Hummon of USDA's Agricultural Research Service. Under the improved methods, samples of milk are taken from the milk used in butterfat tests, eliminating the need for getting samples separately from fresh deliveries to milk plants. This, Dr. Hummon says, results in an estimated potential saving of 50 per cent in collection and laboratory time, records are more accurate, plant routine is not upset and more flexible scheduling of tests is possible.

Reinforced, insulated sandwich panels of concrete may have applications in animal housing units where control over environment is needed, or where sanitary conditions are important, and possibly in dwelling houses. T. E. Kent, with USDA's Agricultural Research Service, started his research in 1958, and has progressed to the point where a 17x25' building looks satisfactory. Concrete outer layers of the panels are $\frac{1}{2}$ " thick, with an insulating area of 2" between them. The insulation may be an expanded plastic or foam glass. If the panels prove feasible they will be made commercially, Kent says. The amount of equipment and special knowledge needed will prohibit farmers from making their own.

Calves are going out to grass four to seven days after birth—even with snow falling—in experiments at the Grassland Research Institute in Berkshire, England. "The earlier we get them out the better they do," reports one of the Institute's experts.

Normal hybrid corn has outyielded its dwarf counterpart by 9 per cent in three-year tests, according to Pennsylvania State University researchers. Tests were made of Pennsylvania 602 hybrid, compared with its dwarf counterpart. Nutritional components were similar, and the varieties differed only in dwarfing characteristics. Yield samples were taken at milk, soft dough and glazed stages, and yield differences were significant at each stage. Dwarf corn stalks are thicker and about two feet shorter than stalks of tall corn. Most of the shortening occurs below ear level. The dwarf corn shows less damage from wind breakage and borers than its normal counterpart.

Feed automation is being carried to the limit this winter by University of Illinois ag engineers at their new, completely automatic beef feeding installation. Components from many different manufacturers have been fit together into a single working unit. Key to the system is a commercial silo unloader controlled by an automatic timer and modified to deliver silage at a uniform rate.

Farmers can "starve" a troublesome species of root-knot nematode with a new high quality, high-protein soybean developed at the University of Delaware Agricultural Experiment Station, Bethel, the new variety, was developed by Dr. H. W. Crittenden, who made thousands of individual plant selections, searching for strains resistant to the root-knot nematode, *Meloidogyne incognita acrita*. Bethel is an erect, branching variety, averaging 44" in height, with medium-sized yellow seeds and a yellow hilum or seed scar. It averages 41.8 per cent protein and 21 per cent oil on a dry basis. Yields in 1958 and 1959 tests averaged 43.8 bushels per acre.

A difference in enzyme activity makes some plant varieties resistant to certain fungus diseases, according to University of Wisconsin research. Experiments with verticillium and fusarium wilt of tomatoes show that these fungi produce an abundance of pectin-splitting enzymes. Some plants are more susceptible to these enzymes and consequently to the fungus diseases. Tissues of susceptible varieties contain much greater enzyme activity after infection than do tissues of resistant tomatoes. This is reported to be a major step forward in plant disease research. Until now, scientists didn't know why some plants were resistant and others susceptible. Although the ultimate reason for differences in enzyme activity still is unknown, researchers think that differences in oxidizing enzymes and other oxidizing substances may be responsible.



Norwegian Seaweed

Research Report

In photo above the Clemson, South Carolina, variety of okra shrub was grown on heavy clay soil to which 250 pounds of Norwegian seaweed meal per acre had been applied. These and other results show that

Norwegian Seaweed is new "miracle" livestock feed and crop supplement

By GEORGE PETER

IS one of the oldest known but little-known-about plants in history—seaweed—about to turn up as the new "miracle" supplement in animal and crops production? Based on latest research reports, it is beginning to look that way.

It is in this context that background on farm use of seaweed might best be examined as farmers and student farmers begin to ask questions. What about the role of seaweed, or Norwegian seaweed meal, in lowering costs, increasing production, creating healthier animals and crops and generally improving efficiency in farming?

Seaweed meal is already fed in the United States as an important source of mineral supplements for livestock rations. Briefly, the form used is dried ground

seaweed. It may be dried artificially or by the sun. Domestic seaweed has a relatively small amount of protein and fat, but contains over 30 per cent minerals. Up to now, it has been fed largely to provide the latter. Imported, or partially sundried Norwegian varieties contain high amounts of vitamins and amine acids.

BREAKTHROUGH ON BEEF

But new beef cattle tests at Washington State University using the Norwegian variety from seaweed harvested off the coast of Norway have discovered an apparent synergistic effect. Norwegian seaweed meal added to the enzyme supplement Agrozyme increased feed utilization as much as 10 per cent.



Mrs. Paul Keht, wife of the Norwegian Ambassador, receives the prize-winning dahlias from Ashby Toombs, Virginia dahlia enthusiast. The dahlias are the first grown with seaweed meal in the greater Washington, D. C. area.

Reporting on the finding in a general paper on feed additives for cattle, Associate Professor Irwin A. Dyer of the Department of Animal Science noted that very first tests resulted in a gain of .26 pound per steer per day with an increase in feed efficiency of 11 per cent. But since steers in the test had ruminitis, it was not certain whether seaweed was contributing to the ration or acting as a therapeutic agent.

This launched a second test which showed a 10 per cent increase in gain and a 4 per cent increase in feed saving when 2 per cent seaweed was fed. This time, adding the Norwegian product to the enzyme Agrozyme shot gains up to 3.49, the highest. Professor Dyer concluded, "An apparent synergistic effect between seaweed and Agrozyme exists." The Norwegian variety was used in both tests.

Scientists are certain of the effects but are continuing research to find out more about the *why* of this multi-purpose additive which is suddenly beginning to be talked about so much.

Norwegian seaweed is available in several forms in the United States, commercially known as Sea-Born. The Mineral Division of Skod Co., Greenwich, Connecticut, distributes it as a seaweed mulch, micro-meal, and as liquified seaweed.

WHAT NORWEGIAN SEAWEED DOES

Sea-Born as seaweed mulch is highly recommended as plant food AND mulch. The horticultural grade is a first-rate root feed, for example. One of its big advantages is that

it is complete as a natural element. It is also low in nitrogen so that it can be used readily as a supplement to regular fertilizers.

Most effective, Sea-Born as a liquified seaweed concentrate is distributed as a single natural source of practically all trace elements. In this form it is the ideal general plant supplement and an excellent soil conditioner. Some direct results on very simple application are:

1) As a soil conditioner—alginic acid and its compounds, *obtainable only from seaweed*, builds up soil structure, helping to bind light soils and loosen clay.

2) As supplier of trace or minor elements to deficient soil—Sea-Born contains all trace elements of seaweed: sodium, iodine, magnesium, iron manganese, copper, cobalt, boron, nickel, and the others. Important: this insures against soil deficiencies that remain undetected as a result of faulty soil analysis.

3) On all fruits and vegetables—when applied as a spray during period of young growth. Flavor, keeping qualities, cooking qualities, and *resistance to disease* improved substantially.

SEA-BORN IS NON-INJURIOUS NO FDA LIMITS

Sea-Born is non-injurious to humans, plants, animals, and birdlife. Seaweed or Kelp, as some call it, is on Food and Drug Administration's list of additives proposed to be declared generally recognized as safe under the new additive



A winner. Jane Ritchie, 4-H Club daughter of the owner of Holly Hill Farm, Frederick County, Md., exhibits champion heifer H. A. Princess Royal. The animal was fed on Norwegian seaweed meal added alone to basal rations. Holly Hill Farm raises prize shorthorns, shows steers and Arabian horses.

law that regulates additives to food consumed by animals or humans.

WHAT FARMERS SAY

On the farm—in particular, where farmers can see and check results for themselves, seaweed meal is receiving wider acclaim. Spot interviews in a single area recently disclosed: John Hudson, veteran raiser-exhibitor of registered cattle, handling 100 head of registered shorthorns—Holly Hill Farm, Frederick County, Maryland. "I've always used seaweed meal. I'm using Norwegian seaweed now and I've never seen such excellent bloom on a shorthorn herd in my life." Jane Ritchie, 4-H Club, and daughter of Holly Hill Farm's owner, also fed seaweed meal, exhibiting 4-H champion heifer, H. A. Princess Royal, at Frederick County Fair and Maryland State Fair.

James B. Lingle, manager of Wye Plantation, Queenstown, Md.—sees Norwegian seaweed as "an unusual forage crop having a very high and diversified mineral content . . ." Average daily gain on 291 performance test bulls on the plantation was 2.51 lbs. Norwegian seaweed was added to basal ration at a little over 2 per cent.

Louis Promos, Southeast U. S. farmer producing Clemson, South Carolina variety of okra. "I used Norwegian seaweed meal, 250 pounds per acre on heavy clay soil. I got very high yields and quality."

William Parreco, diversified farmer, Oakwood Farms, Germantown, Md. Manages 130 head of cattle, including 60

dairy, also raises poultry, grows some of own corn. "As far as I'm concerned, it's practically a 'miracle'. I add Norwegian seaweed meal for *all* my cattle. On poultry results—four years of use—are even better. My eggs are known all over for flavor. On cattle, I started using it at 2 per cent with such results I increased to 4 per cent and got even better. Outstanding thing, my animals were also healthier." Buy ready mix? "No. I buy the meal and have it added at the mill when I get my concentrate." Mr. Parreco uses Sea-Born.

"MIRACLE" SUPPLEMENT?—NEW FRONTIERS

What is most rapidly gaining for seaweed the reputation of "miracle" supplement are the latest reports on the direct benefits of horticultural application of seaweed by Clemson Agricultural College in South Carolina. Sea-Born was used in the experiments.

The Clemson findings are raising the question: will seaweed turn out to be the do-everything supplement? Is seaweed the combination fungicide, fertilizer, insecticide (indirect), growth stimulator, growth retarder—the all-around in-one-package plant protector? Here are some of the results:

Aromatic tobacco plants — the meal mixed in with the soil in plant beds slowed down respiratory activity. This increased growth and produced a higher quality tobacco. Various rates of seaweed, from 100 to 500 pounds per acre, were mixed with the soil. Sampled a month later, only the seaweed-meal treated plants showed lowered respiratory activity.



Dr. T. L. Senn, Horticulture Department, Clemson College, Clemson, S. C. Dr. Senn with a team of assistants is directing research on the effect of seaweed meal on the development and composition of various vegetable and special crops.

Tomatoes—Plants on which the meal was used developed cold resistance. Treated plants stood temperatures as low as 29 degrees while untreated plants died.

Pimento peppers—Norwegian seaweed meal mixed into the soil at a rate of 200 pounds per acre produced 2.7 pods per plant, or nearly double the 1.5 pods per plant produced without the treatment. Plant height increased from 10.6 inches to 18.1 inches. Sea-Born used alone produced peppers almost as big as the plant. Shelf-life extended three times normal. Insecticidal effect: untreated plants showed severe insect damage, the treated plants only slight.

Tree-ripe peaches—showed almost four times longer shelf life when given the Sea-Born liquified seaweed product.

General results on vegetables—weight and color showed startling gains in ambrosia melons, peppers, okra,

tomatoes and sweet corn. Yields on melons and peppers were outstanding. Other plant results: Kentucky blue-grass germinated in one-fourth less time compared to normal 28 days. Legumes, cereal, other grasses, flower seeds, all showed phenomenal growth, particularly zinnia seed in 12 hours against 72 normal.

SEAWEED CAN RETARD

Seaweed can also retard growth. Unlike results on tobacco, when seaweed was applied to geraniums respiration increased so fast that growth was stunted. This property could be used if growers want to hold back a bit to transplant without ill effects.

MYSTERY WEED

Is there a "magic" ingredient in seaweed? The researchers are sure of their results, but admit that there is a lot more to learn about how seaweed does what it does. There is evidence of unidentified hormone stimulation to the plant in reaction as indicated by altered enzymatic activity, for example. Foreign researchers also support this view.

Research is continuing at Clemson College on a grant in aid from Skod Co. under the direction of Dr. T. L. Senn, horticulturist, who has turned up the major findings so far. Meanwhile, equally startling results are being reported on non-agricultural use of seaweed. Doctors J. C. Houch, T. Lee and J. Bhayana of Georgetown University in Washington, D. C. have isolated an anti-ulcer drug from seaweed. In Japan, scientists report a combination of seaweed which, mixed with water, can substitute for whole blood in transfusions.

TOM BUCHANAN
THE MINERAL DIVISION
SKOD COMPANY
GREENWICH, CONNECTICUT

Please send me copies of this Norwegian Seaweed Research Report.

Name

Occupation

Address

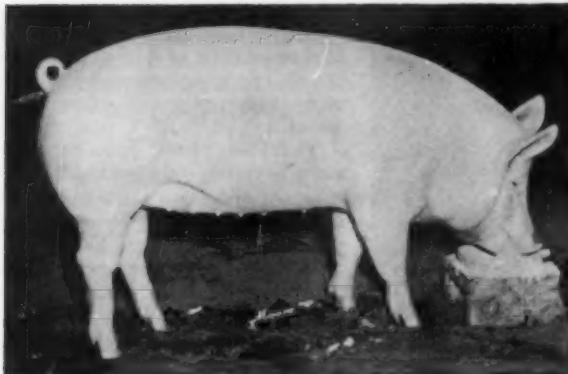
City State



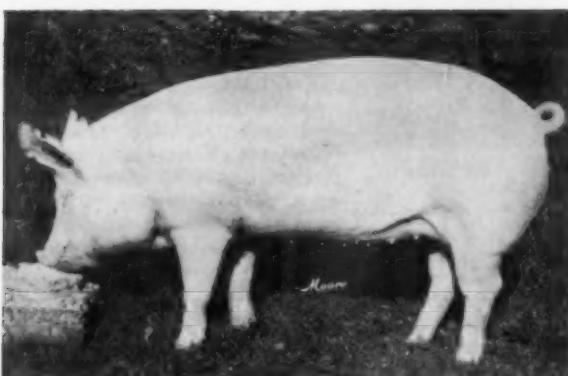
clip
and mail
coupon
today

How Do You Judge These Yorkshire Gilts?

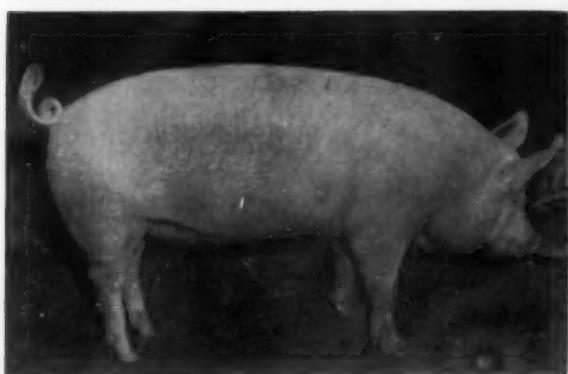
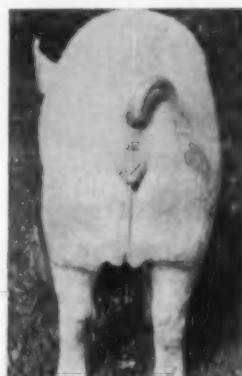
(for official placings and reasons, please turn to page 40)



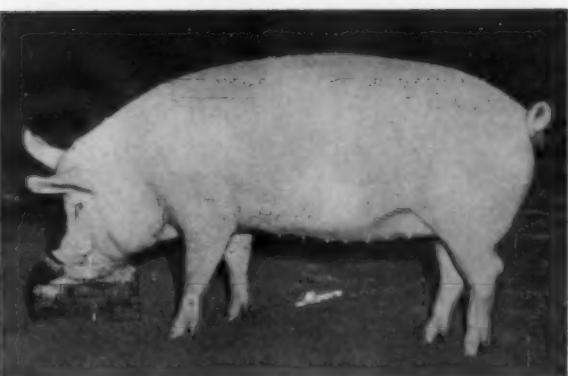
↔ 1 ↔



↔ 2 ↔



↔ 3 ↔



↔ 4 ↔



Ag leaders on the move

This month we initiate a short article series that we like to call "Ag Leaders On the Move." This certainly is the age of travel. No county agent, vo-ag teacher, or any other type of ag leader should concern himself only with what is going on in his own local area. It behooves every ag leader to know what is going on throughout the agricultural world, to say the least! The lead-off spot in this series really "belongs" to the Dow Study Tour, a most successful project sparked by certain "travel-loving" county agents, with Dow Chemical Company "picking up the tab." COUNTY AGENT & VO-AG TEACHER has long advocated tours of this type—both at home and abroad. We hope other companies take Dow's lead and sponsor more worthwhile projects of this type.

NEXT MONTH . . .

We'll give you some tips on touring. As the author puts it, agricultural leaders are without doubt among the "traveling-est" people around. A group of these happy ag travelers decided to pool their lore—much of it picked up the hard way—and came up with some trail-sense we think you can use. Good traveling in 1961!—EDITOR.

County agents like "Idea swapping"

**The Dow Study Tour gives county agents the opportunity
to see what the other fellow is doing in competitive
cropping areas. They come back "rarin' to go" with new ideas.**

Plans for the 1961 Study Tour for county agents were developed recently at Midland, Mich. This will be the third year for this scholarship tour of the Professional Improvement Committee of NACAA in cooperation with Dow Chemical Co. Seated clockwise are Howard Campbell, NACAA president; Walter Kirkpatrick, committee chairman; Richard Bell, assistant director, Michigan Extension Service, representing state extension directors; Earl Hoas, national chairman of study tour program; Orville Walker, former NACAA president; and Burton Seeker, Dow.

BECAUSE a county agent works within a single county, he is in an excellent position to know the agriculture and the people of that area on an intimate basis. On the other hand, this specialization affords scant opportunity to observe what the other fellow is doing in competitive cropping areas; with crops not grown in his local area or in various marketing and agribusiness enterprises.

The Dow Study Tour Scholarship program is a professional training activity of the National Association of County Agricultural Agents aimed at providing a broadening experience for agents. The program developed from the initiative of Walter Kirkpatrick of Antrim County, Mich., who felt he had profited from both domestic and foreign agricultural tours and was interested in extending the advantage to other agents. The Dow Chemical Company recognized the value of the plan and agreed to support it.

Under the program, some 50 agents each year join one of four tour groups studying a wide variety of agricultural operations. Variety in the carefully planned itineraries assures that traveling agents see operations comparable to their own as well as others completely dissimilar. Travelers seem to agree that both are valuable.

"EXHAUSTING BUT VALUABLE"

At present some 60 county agents are back on their jobs with the benefits of a study tour among their resources. They agree that the tours are exhausting but valuable. Typical days on tour begin at dawn with evening critique sessions often running 'til midnight. None-the-less many have described the trip as the most valuable experience of their careers. Ways in which agents have put their new found knowledge to work seem limited only by the number who have made the tours.

The most commonly expressed benefit of the trip was that of a broader knowledge of agriculture over the coun-



try. As Marion Wallace of Ohio phrased it, "I now have a much broader picture of American agriculture which I will be able to inject in my program in many different ways. For example, when we are talking about marketing beef, I will have a better concept of the importance of numbers and kinds of cattle going to market in Indiana and Illinois in relation to our own marketing problems."

TOUR SPARKS NEW ENTERPRISE

Many others commented on their improved ability to offer counsel on crops not traditionally grown in their area. Hoyt Webb realized that apple growing could fill a need for a new farm enterprise in his Alabama county while he was on a study tour. Since his return he has sparked a program that already has a sizeable acreage committed to orchard planting. Robert Jones of Maryland is not in peanut country, but now answers such questions for gardening enthusiasts with observations and literature picked up in North Carolina.

Vast changes taking place in agriculture were the subject of a great many comments on tour observations. A. W. Rowland of Kentucky summed it up saying, ". . . probably the most impressive phase of the study tour was the on-the-spot observations of the rapid changes occurring in farming and associated industries . . . Although our concept of the family-type farm is changing, the tour strengthens my belief that family-operated farms will continue to be the backbone of American agriculture." Similar comments by others reflected new found impressions of integrated farm operations, marketing practices, industrial research in agriculture, atomic research for the farmer, increased specialization or competition within agriculture and dozens of similar concepts.

Touring agents also brought home many new methods or practices either for their own use or for their county growers. Ideas for community development programs were the most popular



Swapping notes and photographs of their trip are members of the North Central tour group at their reunion in October. Seated are Louie Webb,

Michigan; Marion Wallace, Ohio, and Walter Clary, Indiana. Standing are Fred Field, Wisconsin; Howard Brown, Iowa, and Halsey Miles, Illinois.

in this regard. Another popular scheme involved preparation of slide stories and mimeographed data to offer a visitor a comprehensive, graphic summary of agricultural operations in the county.

In all, returning tour members mentioned picking up specific data on some 17 practices or farm enterprises. Livestock feeding or handling most often was mentioned. Methods of weed control, insect control or materials handling tied for second place. The wide variety of collected ideas included even more new methods of handling farm records or taxes.

In addition to providing information, evidence suggests that study tours have been helpful in encouraging reporting activities among agents. "My public relations program has certainly benefited

by this tour," Alvin Maley of Kansas commented. He reported giving talks on his observations before Lions, Kiwanis and Rotary clubs; his Chamber of Commerce; 4-H, Extension Service and farm groups. Such activity has been quite common among tour members. A sizable group also mentioned specific use of tour data in radio broadcasts and newspaper stories or columns. Several of the men maintained running accounts in their hometown newspapers while on the tour.

Perhaps a comment by Paul Bird of Virginia sums it up: "Observing the many new farming techniques, the marketing methods, the industrial and agricultural developments and the general business progress is certainly educational to any observant person."



Members of the Southern region tour stand knee-deep in Bermuda grass as local hosts explain its value during a Georgia stop. The Southern group visited twelve states, intercepting the Northeastern group in the Smoky Mountains.



California farm advisors J. Vernon Patterson and Jack Underhill discuss agricultural production with Keith Jones, Arizona and Bunki Kumabe, Hawaii.

*In Livestock and
Poultry Feeds, today...*

Arsanilic Acid is a part of good management!

FOR CENTURIES, arsenic has served mankind in the search for better health. Even the ancient Greeks used compounds containing arsenic. In 1911, after years of research, Dr. Paul Ehrlich produced his "magic bullet"—won the Nobel prize with the arsenical Salvarsan, first of the wonder drugs.

During World War I, when arsenicals from Germany were cut off, Abbott Laboratories entered the field. Abbott scientists have since devoted many years to the investigation of arsenical compounds and their role in animal and poultry nutrition. From this research has come the final selection of Arsanilic Acid, chosen for its safety and for its unique value as a low-cost growth and production stimulant.

To show a profit today, every farmer must make the best use of his time . . . get the most out of his investment. For his feeds, he must choose feed additives that will give him the greatest return per dollar invested.

After years of practical feeding experience, Arsanilic Acid still stands out as the growth stimulant giving the highest economic return. That's why, in 1961, Arsanilic Acid is a recognized factor in good management.

For egg producers . . . Arsanilic Acid widens the profit margin. Whether it's cold, or whether it's hot, Arsanilic Acid increases production . . . improves feed efficiency. Arsanilic Acid helps layers produce more eggs per bag of feed—season in and season out. Stresses can keep hens from laying all the eggs they're capable of producing . . . and stresses can't be entirely avoided. But Arsanilic Acid can lift your birds over many stress periods.

For hog producers—low-cost way to improve hog-feeding results. Good hog feeds—from creep feeds to finishing supplements—fortified with Arsanilic Acid earn extra hog profits. A healthy-looking hog may be suffering from low-level disease. When this happens, poor weight gains result and feed efficiency falls off. Arsanilic Acid combats harmful bacteria . . . helps protect the pig from active disease . . . keeps him gaining at a satisfactory rate.

Years of practical hog feeding trials proved that good hog feeds fortified with low-cost Arsanilic Acid can help earn extra profits. The three-year test averages at Purdue University show that Arsanilic Acid-fed hogs gained over a pound per week more than control hogs. They made 100 pounds of gain on an average of 17 pounds less feed. All together, that amounts to 84¢ extra profit per hog.

For additional literature about Arsanilic Acid—for complete details about this low-cost poultry and livestock profit builder—write to Abbott Laboratories, Chemical Marketing Division, North Chicago, Illinois.

Almost every hog needs Arsanilic Acid! A dime's worth of Arsanilic Acid is all these baby pigs will need—all the way to market! Hogs fed Arsanilic Acid have gained five more pounds per month than control hogs fed the same basic ration without it. Arsanilic Acid helps hogs make bigger gains on a dollar's worth of feed. That means more profit per hog.



Improved production all-year-long for only a few pennies per bird! Arsanilic Acid helps these hens maintain a high rate of egg production throughout all four seasons. In scientific studies, Arsanilic Acid has increased both feed efficiency and egg production. An improvement in feed efficiency of only one-half of one percent pays for the Arsanilic Acid. This amounts to only 2 extra eggs per day from a flock of one thousand hens.



Arsanilic Acid improves broiler quality. Broilers like these, raised on feeds supplemented with Arsanilic Acid, grow to market weight faster—require less feed. In addition to accelerating growth rate and increasing feed efficiency, Arsanilic Acid gives better feathering and pigmentation.



ARSANILIC

(ABBOTT'S PRO-GEN®)



ABBOTT LABORATORIES
CHEMICAL MARKETING DIVISION
NORTH CHICAGO • ILLINOIS

audio-visual news and views



By GEORGE F. JOHNSON

Color Slides—the First 25 Years

TWENTY-FIVE years ago, 35mm. Kodachrome film and the miniature camera joined hands to give us color slide photography. My first color slides were made with a borrowed camera in May 1937 so I have been able to observe this development almost from the beginning. It has been most gratifying to witness the growth of the little 2" x 2" slide from practically nothing to its present pre-eminence as an audio-visual tool.

"What helpful observations can you give our readers based upon this long experience producing and using color slides?" asks Editor Berg.

Perhaps the most significant fact of all is the increasing number of ag teachers, extension workers and other leaders who are doing a first-rate job of color slide photography. More successful color slides will be made and used in 1961 than in any previous year.

Here are four important ways ag workers are likely to improve their color or photography this year and in years to come:

1) They will get closer to the subjects with their cameras and will pinpoint better the exact lesson desired.

2) They will build more variety into picture sequences by the judicious mixture of distant, intermediate and close-up views; by high and low as well as normal position of camera when making exposure, and by occasional change from horizontal to vertical pictures.

3) They will assure the best possible photographic results by taking extra exposures of important subject matter. Professionals usually don't trust a single exposure; why should amateurs invariably do it?

4) They will become better photographers because they will take more pictures. There is an element of truth in the observation that the more frequently the camera is used, the better the results will be.

The five most helpful bits of advice

given me during this quarter century are these:

1) Avoid complete flat lighting of outdoor subject matter (have light source away from your back so that some shadows show in picture).

2) Take subjects as close as possible avoiding all distracting elements at front, in background and on either side of the subject.

3) Hold camera steady. Practice bracing camera by face and hands so that it is absolutely rigid the exact moment the exposure is made.

4) Walk around subject matter if possible, viewing all angles including high and low, and then select the viewpoint that gives the best lighting and view of the subject.

5) Take more than one exposure varying setting of camera and viewpoint. If one setting is wrong, it is likely to be found before a second exposure is made.

6) Keep camera free of dust—outside and in the film channel—and handle the equipment as carefully as a watch.

Quick slides—"In a recent issue of COUNTY AGENT AND VO-AG TEACHER, you referred to your quick 2" x 2" slide procedure using Polaroid film. Our problem is one of preparing black and white 2" x 2" slides for short weekly TV programs. We now use direct 35 mm positive film. Our problem is one of getting the roll completely taken, developed, mounted and script prepared in time. Your Polaroid technique appears to be a short cut. Can you supply more details?" G. M. D., County Agent, Washington.

We frequently use our Polaroid camera and transparency film for producing 2" x 2" slides for TV use. If the material is a tabulation or a chart of some type, we use the Polaroid 208 copy stand, and often make four slides on one piece of film. If the desired visual is outdoor subject matter, we take the picture at sufficient distance to enable us

to fit the desired view inside a 25 mm 2" x 2" TV slide mask.

If a number of outdoor subjects is needed to tell a TV story, we would probably record them first on Polaroid 200 print film. Then take these prints in to our copy stand, place the 3 1/4" x 4" Polaroid transparency film in the camera and copy four prints at one time on one piece of film. These are then cut into four slides. This is more economical in use of the transparency film, and gives a print for the file.

We have worked entirely with the 3 1/4" x 4" size film. You might wish to work out a procedure using the 2 1/4" x 2 1/4" size film making two instead of four slides at one time.

NEW IDEAS AND EQUIPMENT

The new Viewlex **Strip-O-Matic** changer is now available so that filmstrips can be advanced by remote control from any place in the classroom or meeting hall. This changer fits all Viewlex combination slide-filmstrip projectors. The price complete is \$39.95. A 20-foot extension cord for remote control is available.



Viewlex projector has Strip-O-Matic device to advance filmstrip by remote control.

Duo-Screen designed for interlocked operation of color slide and movie projectors is now on the market. The change of slides is activated by inaudible frequency impulses on the movie film. No tape or disc recordings are necessary; action scenes and lip-synchronized narration can be interlocked with the slide presentation.

New **faster Kodachrome** 35mm. film when available this spring or early summer with an ASA rating of 25, will be one and a half times faster than present ASA 10 Kodachrome (not two and a half times faster as stated in a recent issue).

The new **AG-1 glass flashbulbs** are cheaper, smaller and easier to use than older types. The light output, however, is lower than No. 5 or M-5 bulbs. Adapters are available for using these bulbs in most flash guns.

Significant new developments in 8 mm. motion picture photographic and projection equipment are greatly increasing the use of this less expensive movie medium as a tool in education.

SPONSORED

Research BULLETIN

COUNTY AGENT
VO-AG TEACHER

REPORT FROM STAUFFER . . . PEST CONTROLS FOR VEGETABLES

SPONSORED BY STAUFFER CHEMICAL COMPANY

• 380 MADISON AVE.

• NEW YORK 17, N. Y.

FARM CHEMICALS ARE IN THE SPOTLIGHT

It has been said that chemicals have contributed more to farm production progress in the last two decades than any other single thing.

This does not diminish the importance of developments in plant breeding, machinery, irrigation and all other phases of agriculture. It merely emphasizes that growers have found new chemicals to be close allies in the continuous fight to produce better food and fibre at less cost.

Farm chemicals represent a broad and complex spectrum. They include pharmaceuticals and other animal and poultry health products, fertilizers, and chemical pest controls and regulators. In many respects, crop protection with pest controls is the most complex and most easily misunderstood.

PEST CONTROL IS A COMPLEX PROBLEM

The problem of pesticide effectiveness is closely tied to the type of crop, the kind of weed, insect or disease, weather and soil conditions, and in some cases, even crop varieties. It is a fact that some pesticides work well in some areas, not so well on the same kind of crop in others. Some pesticides are recommended for certain varieties of a crop but not for others because of the possibility of injury to fruit or foliage.

The purpose of this Bulletin is to give you a brief summary of some of the newer chemicals which have already proved of great benefit to vegetable growers. It is certain that chemical materials now being tested will bring even more effective and more economical crop protection.

GROWER SHARES RESPONSIBILITY FOR PESTICIDE EFFECTIVENESS

Underlying the whole problem of pest control is the grower's own responsibility for making sure the chemicals he uses are properly used. Label instructions and recommendations are of little value unless they are read and followed. Years of time consuming and expensive field testing go for naught when a grower decides to make his own rules.

A chemical is like an automobile. A car is a safe and useful vehicle in the hands of a careful driver, but it's a weapon when a careless individual is behind the wheel. Care is required when you are using and handling chemicals. The time you take to read the label is the most important four minutes in pest control.



SEED TREATMENTS:

Treating seed to protect against soil-borne diseases is accepted practice today among seed growers and farmers. The cost is small compared to the risk of having to replant the whole crop because of a poor stand.

Growers of vegetables seeds have long recognized the versatility and usefulness of Stauffer Captan 75 Seed Protectant. Captan controls seed rots and damping-off on most varieties.

Captan 50% wettable powder is widely used for potato seed piece treatment to prevent rotting in the soil.

A significant recent development in seed treating is combining chemical compounds to increase the effectiveness of the treatments. Stauffer has helped pioneer this work. The objective is to produce seed treatments which will control more soil diseases as well as troublesome soil insects. Several combinations of Captan and other pesticides are available.

SOIL FUMIGANTS:

Working hand in hand with seed treatments, soil fumigants go right to the heart of the problem, the soil itself.

One of the most effective newer soil fumigants is VAPAM®, a liquid material which turns to a gas in the soil. It controls weeds, germinating weed seed, nematodes, symphylids (the garden centipede) and disease-causing organisms.

VAPAM is especially important in seed beds because it reduces the work and expense of weeding, gets rid of seed and root enemies in the soil, and gives seedlings the full benefits of plant foods and moisture. Fumigation with VAPAM is simple because special equipment is not needed.

Most agricultural authorities agree that soil fumigation is here to stay, and will become standard practice with more and more growers.

© Stauffer's Reg. T.M. for a soil fumigant.

SOIL INSECTICIDES:

Growers of dry and green bunching onions have found TRITHION® insecticide highly effective in controlling onion maggots, especially in areas where the maggot has built up a resistance to chlorinated hydrocarbon insecticides.

TRITHION can be used in muck or mineral soils. One of the simplest, most effective application methods is to apply the insecticide in the furrow when you plant seed, sets or transplants. Available as a 10% granular material, it does not reduce stands or cause injury to onion plants when used at recommended rates.

Granular formulations of dieldrin, aldrin, chlordane and DDT are available from Stauffer for controlling soil insects in certain other vegetable crops.

© Stauffer's Reg. T.M. for an insecticide-acaricide.

PRE-EMERGENCE HERBICIDES:

Perhaps no phase of agricultural chemistry holds more promise than soil applied herbicides which selectively knock out unwanted weed seed, giving crop seed a chance to germinate and grow without competition.

Stauffer, a leader in research on pre-emergence herbicides, has developed EPTAM®. This material is currently recommended for use in mineral soils to control nutgrass and annual grasses in Irish potatoes, and annual grasses and certain broadleaf weeds in snap beans, dry beans, and small seeded legumes such as birdsfoot trefoil and alfalfa.

EPTAM is available in liquid or granular form for use as a preplant treatment. It may be used after seeding or at last cultivation in some areas and on some crops. Immediately after application, EPTAM is incorporated into the soil with a rotary tiller, or by thorough cross discing or spike tooth harrowing.

Growers who have a problem with grassy weeds will want to watch for further developments in EPTAM. Many analogues are being tested.

© Stauffer's Reg. T.M. for an herbicide.



FOLIAGE INSECTICIDES:

No discussion of insecticides would be complete without first acknowledging the importance of such products as DDT, TEPP, malathion, methoxychlor, rotenone and pyrethrins. These and other materials play a major role in crop protection on vegetables.

The four newer products below have special applications which most growers will find interesting:

TRITHION® insecticide-miticide—In addition to its use as a soil insecticide to control onion maggots, TRITHION has outstanding qualities as a combination insecticide and miticide for plants. It controls the Mexican bean beetle, bean aphid, potato leafhopper and flea hopper, serpentine leaf miner, spider mite, tropical mite and other insects on a variety of vegetable crops. It gives quick kill, has long residual action and is less hazardous than many other organophosphorus materials.

FLOWABLE PARATHION 400—A water-base emulsion which is compatible with most other spray materials and can be used in all types of sprayers. It gives you all the advantages of parathion plus greater safety to plants than solvent based emulsifiables, and it's less hazardous to handle than other parathion formulations. Flowable Parathion 400 is a Stauffer specialty.

SEVIN® 4 FLOWABLE—A special, extremely fine dispersion of Sevin insecticide in water, formulated by Stauffer. A new carbamate insecticide, Sevin has a long residual life, low toxicity to humans and other warm-blooded animals and is effective against many insects which are resistant to other insecticides. Recommended for control of the Mexican bean beetle, Colorado potato beetle, leafhopper, lygus bug, stink bug and many others.

© Reg. T.M. of Union Carbide Corp.



THURICIDE® Microbial Insecticide—Not a chemical, Thuricide contains viable spores of the microorganism *Bacillus thuringiensis* which effectively controls certain Lepidopterous insects. After the larvae eat Thuricide, they stop feeding and soon die. Thuricide has proved harmless to humans and all other warm-blooded animals and fish. It is still being used experimentally on a wide variety of crops in many parts of the country. Fighting insects with microbes is an entirely new concept with a brilliant future.

© Reg. T.M. of Bioferm, Inc.



FUNGICIDES:

Many plant disease organisms are soil-borne. This is why seed treatments and soil fumigation are so important to vegetable growers. By controlling these organisms in the soil, vegetable crops get off to a flying start and are able to resist other diseases better during the growing season.

In disease control it is especially important to follow recommendations of local authorities. Successful control depends on using the proper fungicide in the right manner on the correct schedule. Well-known fungicides such as fixed copper, Bordeaux mixture, ferbam, maneb, zineb, and others are basic controls. Below are brief remarks on three fungicides of special interest to growers.

CAPTAN 50-W—Captan is the most widely used fruit fungicide and is an important seed treatment. In addition,

it is recommended for angular leaf spot, anthracnose, downy mildew, early and late blight, gray leaf spot and Septoria leaf spot on beans, peas, melons, cucumbers, potatoes, squash and tomatoes. It is also an excellent potato seed-piece treatment to control seed rot and damping-off, and is recommended for potato storage rot control.

PHALTAN® 50-W—Especially recommended for control of early and late blight on potatoes.

® Reg. T.M. for phthalimide fungicide.

NABAM 93-SP—An instantly soluble powder that's easier to handle than other forms of nabam. When mixed with zinc sulfate, this material gives economical control of many vegetable diseases.

WHEN USING ANY FARM CHEMICAL, ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS CAREFULLY.

For more information on any pesticide mentioned in this Bulletin, or for free copies of the Bulletin, write to the address below.

STAUFFER CHEMICAL COMPANY

380 Madison Avenue, New York 17, New York

Glendale, Ariz. • North Little Rock, Ark. • Los Angeles, Calif. • San Francisco, Calif. • Tampa, Fla.
Harvey, La. • South Omaha, Nebr. • North Portland, Ore. • Houston, Texas • Lubbock, Texas • Weslaco, Texas.



NOTICE: The information contained herein is, to our best knowledge, true and accurate. Because conditions of use which are of critical importance are beyond our control, we make no warranty or representation, express or implied, except that all products conform to the chemical description on the label. No agent of this company is authorized to make any warranty or representation concerning our products. Always follow directions and carefully observe all precautions on the label. Products used contrary to directions may cause serious plant or personal injury.

WHERE DOES THE TIME GO?



There's literally no limit on what time is worth for the outstanding individual. If it's flying by so fast you can't catch it and use it wisely, these tips on organization should prove extremely valuable

By HAROLD P. ZELKO

IF I only had the time! All of us have heard and said this many times. To say that "time is our most precious commodity" is to repeat a cliche, state a paradox and utter a truth in the same breath.

In manufacturing and production, time is measured and evaluated in terms of the amount of production units a worker can produce in a given unit of time, such as one hour. Rate of pay per hour is thus determined, with some consideration given to skill used and quality of work produced.

But what about teaching and advisory work? Well, those of us in professional, developmental or teaching work can place a higher value on time than the production worker. For the more time we have and can utilize, the more we will get done among the limitless number of things we want to do.

As we move further away from mechanical operations and more toward functions requiring planning, creating and administration of work operations

and people, we find much more intangible values placed on time. There's literally no limit to what it is worth for the outstanding individual!

We have but to look at the top salaries of top executives of large corporations to realize this. Similarly, the high salaries of outstanding actors or others with unusual "performing skill" show how high a value is placed on the time to do such activities.

HOW MUCH TIME DO WE WASTE?

This question is not as easily answered as we first assume. All of us waste time, if by wasting it we mean failure to use all of it to some specific advantage.

But is this really the objective we are striving for? If it is, then we'd have to eliminate that part of our lives where we make use of time for no real tangible purpose at all, such as the so-called "coffee break" on the job (which is said to waste time), exchanging ideas informally with a friend, watching television or a movie, taking a nap or just sitting at one's desk and thinking.

I'm sure we've all heard of the manager who was caught just looking into space and was asked if he didn't have

anything to do. He replied, "I was thinking," and the answer was, "We don't have any time for that around here."

The point is that it is literally impossible to use all time to some tangible and specific advantage or goal. Relaxing and taking time out from our work is a necessary ingredient for the stamina and enthusiasm we need when we are working. And spending time for purely social and entertainment objectives is also a necessary part of life.

It is the ability to strike a happy balance between time meant for work purposes and time for pleasure that is extremely important.

The goal then, should be to use that time we have for work purposes to the fullest possible advantage. When we fail to do so, we are wasting time. The individual who can do so gets a great deal more done and usually goes a lot further than the person who can not.

HOW CAN TIME BE ORGANIZED?

The question presumes that we can organize time. But the mere fact that it is not a commodity or a physical thing makes this difficult. Actually, then, we are really organizing the things that

to improve farm spraying



**SPRAYING SYSTEMS
SPRAY NOZZLES
and related equipment**

for better performance
Tee-Jet Spray
Nozzles with
choice of over 400
interchangeable
orifice tips.



for easier installation
Split-Eyelet Tee-Jet
Connectors. Simplify nozzle
and drop pipe
installation.



for better control
DirectoValves for
fast, accurate
spray selection.
Diaphragm
pressure relief
valves and all
other accessories.



Most components in choice of brass,
aluminum, Nylon and stainless steel
for all spraying needs.

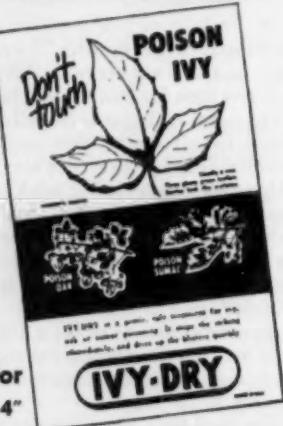
Write for Catalog 30.

SPRAYING SYSTEMS CO.
3257 Randolph St.
Bellwood, Illinois



FREE POSTERS

2-Color
11"x14"



FOR CLASSROOM DISPLAY
Illustrating and Describing
POISON IVY
POISON OAK and POISON SUMAC

Please specify number of classroom POSTERS
you need and the number of MINIATURES
for distribution among pupils.

Write IVY CORPORATION
Montclair, N. J.

have to be done with time, rather than time itself.

As proof that this can be profitable, all we have to do is look at successful people and those who get things done. They are usually the busier people, those with the most things to do. When a new request or assignment comes along, such a person knows that it will make him a little busier, but he also knows that by practicing some basic principles of organization, he can do this assignment too. The person who says, "I don't have time to do it," frequently is not as busy, but he has not learned to do things efficiently.

Many of us spend too much time worrying about whether we can do a job and how we can get it done, whereas the job could have been taken and finished if it had been accepted and executed systematically.

Frequently the difficulty is because we are not able to distinguish between a problem or situation about which we are powerless to do something, as compared with another that can be tackled and completed by specific action.

One of the first principles, then, in organizing the things we have to do is to separate those we can and should do something about from those we cannot handle.

Following this, we should classify the things we have to do. Here's a suggested way for doing this:

- I. According to relative urgency
 - A. Those that are *immediate*
 - B. Those that should be done *soon*
 - C. Those that are *long-range*
- II. By degree of difficulty and time needed
 - A. *Easy to do*—can be done quickly
 - B. *Harder to do*—will take more time
 - C. *Difficult and/or will take time to do*
- III. According to who will do them
 - A. *Can do yourself*
 - B. *Done by you plus help of others*
 - C. *Delegate to others* (subordinates, colleagues, friends, etc.)

According to relative urgency is a most important classification, for this will reflect your degree of responsibility and reliability to have things done when they are needed or promised. Most of what we do in the work situation is done for others or for the benefit of the organization or group.

The successful operation of any business or enterprise depends on the ability of people to get things done according to a plan or schedule. If an assignment has to be done today, put it at the top of the list or the pile on your desk. This should be your first consideration in classifying it. Then you can apply the other two factors of classification. If

there is no hurry for it, you may still decide that it is easy to do and that you can do it yourself, perhaps finishing it quickly too. If it is long-range, then you should plan a time sequence perhaps involving stages or segments of the total job, who will do each, and how you will put it together.

By degree of difficulty or time needed means to analyze the job to be done in terms of relative difficulty and relative amount of time needed in relation to other things. Difficult jobs usually take more time, but not necessarily. They frequently take more people and require the assistance of others, but again, not necessarily.

The good organizer will be able to assess the job and determine the answer to these questions as initial planning "musts" before tackling the job itself. The little time it takes for such planning pays off well in relation to the time it will take if the task is not properly assessed — by floundering half way through it and then realizing that it is too difficult to do yourself or that there are complications which should have been foreseen. It is well to take each job, after it is placed in this more difficult category, and estimate the time it will take to complete it, breaking this into segments of time if possible.

According to those who will do them has to do with your decision as to whether you can (or should) tackle the job yourself, whether you need assistance from others, or whether you should delegate it fully to others. This is probably as important a part of the process of classifying things to be done as any other phase of the process. In many respects, it is the phase that may spell the difference between executive and administrative ability and simply a "doer" or a production worker. The ability to enlist the assistance of others in a joint effort, and to delegate to subordinates is an essential quality of the manager who has the capacity to get things done. In so doing, he frees his own time for planning and for doing the jobs that he cannot delegate or have others help do. If he cannot do this, he will forever be concerning himself with minor jobs and details which will eat into his own time and make him a slave to time rather than its master.

These few principles of recognizing the value of time, realizing that some time must be spent in relaxing (even if this has to be called "wasting"), and learning how to classify and organize this elusive "commodity" comprise no panacea toward getting your work done easier. They should help toward getting more done and thus toward a more relaxed approach to work responsibilities.

Harold P. Zelko is Professor of Speech, College of Liberal Arts, The Pennsylvania State University, University Park, Pa.

"If you ask the cow... the longer the hay, the better..."



So replied a famous animal husbandman when asked what length was ideal for cattle.

The method of putting up cured hay, of course, depends on feeding practices. But baled hay probably comes closest to the preference of the cow.

And baling it with an Oliver 62 makes it better still. First, by packaging it faster (13.44 tons per hour in a timed test) to reduce the risk of nutrient loss in a bleaching sun or leaching rain. Second, by the gentlest handling of all—because only slender tines carry the crop from field to bale case. Oliver's patented Roto-Flo Feeder forks in the biggest bunches smoothly, surely...builds a bale with at least eleven sliced beats. No augers grind; no beaters pulverize the rich, fragile leaves.

Designing power and machinery to make farming more profitable has been the business of Oliver for 112 years. And the counsel of your neighborhood Oliver dealer is at your call. Also, consult him when equipment and shop facilities are needed for educational projects. He'll be glad to cooperate.

OLIVER CORPORATION, CHICAGO 6, ILLINOIS.

OLIVER





Scanning
the
LIVESTOCK
and
POULTRY
Scene



IMMUNIZATION instead of antibiotics to stimulate growth? It's possible.

At the Fifth International Congress in Nutrition held in Washington last fall, Dr. Willard J. Visek, physician and assistant professor of pharmacology at the University of Chicago disclosed:

An injection of pure urease obtained from a plant—the jackbean—results in a surge of growth in laboratory animals. The animals gained more weight, faster and more efficiently!

In experiments with more than four hundred rats and chickens, Dr. Visek and his associates injected the pure urease at scheduled intervals into newborn animals for the first month or two of life.

The experiments raised the average efficiency of growth per gram of food intake by 10-20 per cent. In one case the improvement was 40 per cent. In one group of chicks, average weight gain per bird in eight weeks was 1,310 grams compared with 1,182 per chick in the control group. Among injected rats, the feed required per gram of gain was 10-12 per cent less than that of non-treated rats.

SWINE

Scanning the livestock scene, one significant development stands out in swine production. Disease-free pigs!

O. Burr Ross, head of the department of animal science at the University of Illinois, reports that the new specific-

pathogen-free programs for producing pigs may correct many ills in our present-day hog business.

Disease-free pigs are available through "custom operation" by hysterectomy of an owner's sows. One commercial laboratory is in operation in Wisconsin. Another has been granted a license and a third and final one will be licensed soon. Most swine diseases are carried by adult stock and "pass on" to susceptible pigs. The new system avoids this by breaking the chain of transmission.

Many diseases such as hog cholera, swine brucellosis, leptospirosis, virus pig pneumonia, atrophic rhinitis, transmissible gastroenteritis, hemorrhagic dysentery or bloody scours, several non-specific intestinal infections, and all external parasites can be eliminated by this system. The system is called SPF which stands for specific pathogen free.

Farmers arrange for an operation time or date with a commercial SPF laboratory through their local veterinarian. They furnish sows and must have *exact* breeding dates.

They remove all hogs from their farm, clean up and disinfect buildings, equipment, and premises. Farm is free of all swine for at least six weeks before bringing in SPF pigs. Some arrangement must be made to remove the sows to be operated on so that they may be held until they are taken to the SPF laboratory.

Sows are delivered to the SPF laboratory. Labs tell farmers when, depending on breeding dates. The sow is anesthetized and the pigs delivered by hysterectomy (complete removal of the uterus) two to four days before their normal farrowing date. Most laboratories operate 112 days after the sow is bred.

Pigs are removed from the uterus in a sterile hood. They are weighed, identified, their navel cords are tied, clipped and disinfected.

Pigs are placed in a sterile carrying case and transferred to the SPF laboratory rearing quarters and are placed in individual isolation units for one week. The air they breathe is filtered and the modified milk formula they are fed is sterilized.

Then they are removed to colony brooder units which hold 8 to 10 pigs at the end of one week. They are given pasteurized milk and dry starter ration. They remain in the colony brooder for three weeks.

Pigs are taken to the farm when they are 30 days old. Ordinary rearing methods are used. This will vary with the time of year.

Pigs are grown to sexual maturity and used as breeding stock.

All replacements or additions must come from an SPF laboratory or other SPF herds. Strict and absolute quar-

tine must be maintained. No visitor or vehicle must enter the hog house or lots. SPF swine must be isolated from other swine by a minimum of 300 feet. All natural drainage must be away from the SPF swine area. Direct contact must not be made with the SPF swine by anyone unless he is wearing coveralls and boots provided by the owner.

Artificial insemination of swine is coming along strong. One co-op in eastern Iowa already is providing artificial insemination. One advantage is it eliminates boar travel, says A. H. Jensen, University of Illinois animal scientist. This reduces the chance of boars' picking up and transmitting disease. Farmers also get the services of boars bred for resistance to certain diseases.

The co-op has a pool of boars. When farmers have stock ready to breed, a man is sent out with semen to breed the animals. Cost is about \$5—a lot better than each small producer spending precious time and money locating and buying an expensive, top-notch boar!

Artificial insemination could lead to more meat-type hogs, the goal of swine producers.

POULTRY & EGGS

Larger units, greater production efficiency and a higher quality product for the consumer is what the experts see as they scan the egg market scene.

Mechanization is bringing about big changes in the egg industry, says Hugh S. Johnson, extension poultry specialist at Michigan State University.

In the next ten years, automatic egg-gathering and packing equipment may become as common as automatic feeders and waterers, Johnson predicts. And producers will install more exact equipment to control laying house lighting, ventilation and temperatures — maybe even air conditioning.

This will require investment of large sums of money, the poultry specialist points out. Such investments will require flock sizes going to minimums of 10,000 to 15,000 and to as high as 100,000 or 200,000 layers or more. Today's average commercial-flock size of 2,000 layers will not be large enough to provide an adequate living and be competitive.

Consumers will see development of new prepared and pre-cooked egg products for table use.

Regional and national brand names and packages will probably be developed for egg marketing, Johnson predicts. National brand selling will be backed by planned production in both volume and quality geared to market demand.

Producer-retailer contracts are likely to develop. Integration or coordination of large-scale egg production and marketing is necessary for the egg industry

to stay competitive in the future food business.

Egg producers will need to locate their flocks close to metropolitan areas for store-to-door delivery of eggs within 24 to 36 hours after they are laid, Johnson believes. Both egg distributors and retail chains prefer short marketing channels. Flexibility will be needed, because consumer demand varies daily.

The egg business has just begun to scratch the surface when it comes to applying modern production and merchandising techniques, the specialist points out. Opportunities in these fields are practically unlimited. Producers need only intelligent analysis and direction for the future—not fear of it.

Mechanical sizing and packaging of eggs added to a semi-mechanized grading and packing line can cut the total cost of the operation by about 10 cents a case below the cost of many methods now widely used, according to a research report issued by the U. S. Department of Agriculture.

The mechanical sizer and packager were developed through research performed under a contract with the Agricultural Marketing Service, as another step toward complete mechanization of egg handling. The improved packing line mechanically sorts eggs by sizes, electronically eliminates those containing bloodspots, turns the small ends of the eggs down and places them in one-dozen cartons. Manual work remaining consists largely of starting the eggs into the mechanical line, taking out dirty, cracked, or misshapen eggs, packing the cartons into cases and providing empty cartons and cases.

The new devices performed well in tests conducted under actual commercial operating conditions. The report, part of a broad program of AMS research to improve efficiency and expand markets for farm products, emphasizes the importance of operating and maintenance procedures and product quality.

A copy of the report, "Automatic Sizing and Packaging of Eggs," Marketing Research Report No. 424, may be obtained from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

Egg-breaking processors face a problem arising, strangely enough, from improved methods of egg production. The problem is how to get the dark yellow color back in egg yolks.

South Dakota State College poultry scientists may be able to help solve the problem, so processors can tap the higher prices in market outlets. Premium prices for dark egg yolk products are paid by noodle manufacturers and sponge cake bakers.

Changes in methods of egg production make it more difficult to obtain quantities of dark colored yolks. In the past, hens on free range consumed large amounts of fresh green feed, and farm-run eggs carried a lot of yellow-orange pigment in the yolks. In quantity, these yolks served as blenders to standardize egg yolk color. Now, more and more hens are kept in confinement on diets which produce uniformly colored yolks, most often much lighter in color than required by processors.

In response to requests for help from processors in the area, State College poultrymen, in two experiments using seven diets, found that a 20 per cent alfalfa meal supplement caused hens to produce eggs with yolks dark enough to satisfy color requirements for special egg-breaking purposes. In the diet, yellow corn was the major energy source.

Georgia county agents have been given this guide to follow in helping their poultrymen estimate the size of egg storage room and refrigeration equipment. Many poultrymen have figured the size of their egg storage room and refrigeration unit based on the size of their current flock—only to find later that some advanced planning to take care of subsequent expansion would have saved them money.

It is relatively easy to calculate the size refrigeration unit needed if a certain size is not listed in the table. First calculate the total area of walls, ceiling, and floor in square feet. Multiply this by six. This will give you the Btu's per hour capacity needed to overcome conduction and miscellaneous heat gain. Next multiply the number of cases of eggs or equivalent, that are placed into the cooler daily times 250. This will give

Approximate Size of Egg Cooler and Refrigeration Equipment for Different Sizes of Flocks and Twice-A-Week Egg Delivery

Size of Flock (No. of Birds)	Est. Daily Production (Cases)	Inside Dimensions (WxLxH, ft.)	Capacity Cases Stacked	Size Refrig- eration Equipment
Up to 1500	2½	4x5x5	15	1/4 hp.—2490 Btu/hr.
2500	4+	4x6x7	25	1/2 hp.—3240 Btu/hr.
5000	8	6x8x7½	45	1/2 hp.—5200 Btu/hr.
10000	16½	8x10x7½	70	1 hp.—11000 Btu/hr.

Estimated production is figured at 60 percent. Height of cooler can be increased to 8 or 8½ feet with no change in size of equipment.

you the Btu's per hour capacity needed for cooling the eggs. The sum of these two figures is the estimated rating of the refrigeration unit in Btu's per hour.

In determining the size refrigeration unit needed figure the running time as 16 hours of the 24.

CATTLE

Recent research reveals distinct advantages in enclosing cattle feedlots with steel strands. This cable structure permits maximum airflow in a feeding area. Resulting cattle comfort means more rapid gains when they are on full feed.

All this comes from U. S. Steel agricultural experts who are talking up an "inexpensive and highly efficient" cattle feedlot fence system. "Amerstrand" is the name of the steel cable. Completing the system are heavy duty springs and steel or pressure-coated posts.

Requiring no special building tools, steel cable is strung through the posts. The cable is made "sag-proof" with extension springs, used at end and corner posts to give the fence flexibility when cattle crowd against it. The end and corner assembly of the feedlot fence system is supported by a horizontal steel brace and a diagonal tension brace.

Particularly suited for all types of weather conditions, steel cable reduces the shade area in feedlots. This hastens drying of a feeding area following rain. Even drifting snow is reduced since it blows through the narrow steel strands.

Agricultural economists at Virginia Polytechnic Institute have put together some interesting figures on how much it costs to keep a beef cow a year, says George Litton, head of the animal husbandry department.

Winter feed costs are put at \$33, for 1½ tons of hay costing \$22 per ton. Litton says this may not be representative for mountainous areas where in cold weather cows require more feed.

Summer feed is figured at \$34, for 2 acres of pasture at \$17 an acre. Pasture costs were figured as follows: fertilizer amounted to \$6.30 per acre; interest at 6 per cent on land valued at \$100 an acre came to \$6; fencing the land, clipping it, and spreading the fertilizer accounts for another \$4.70, making a total of \$17.

Litton says that 70 per cent of total annual costs of keeping cows is in the feed and pasture charges. If total figures are available, it is easy to figure feed costs.

A charge for machinery and equipment is placed at \$2 a year per cow. The cow is valued at \$150, so interest and taxes on this amount come to \$9. There is a charge for the bull that amounts to \$5 per cow.

It has long been known, says Litton, that labor is one of the bigger miscellaneous items. The economists arrived at a figure of \$8 for labor costs per year

for one cow. A bedding and comfort charge of \$1 was added.

Whether there are buildings or shelters, there are holding pens and chutes and lots and extra fencing and repairs for these, which may amount to \$6 per cow per year. Another bill that can't be ignored is \$3 for veterinary services and for testing, and medicine charges.

The total comes to \$101 per cow per year, but a credit is allowed of \$5 for manure. This brings the total figure down to \$96.

Litton says, "Applying these figures to the cattle business the last 14 years in Virginia, there would be five years of either breaking even or going in the red, and nine years of making a little money."

This depends, he adds, on the most efficient management and with close attention to calving percentage. If the calving percentage gets down to 83 percent, the cost of the calf will not be held to the present \$96 figure, but would rise to \$115.66. At this figure, cattlemen would have lost money in about half of the last 14 years.

Other items will affect profit in addition to the cost of keeping cows. Weight of the calf at market time is one of these other items. If each cow has a calf and the calves weigh 500 pounds, the break-even cost would be \$19.20 per cwt. If they weighed only 400 pounds the break-even point would be \$24 per cwt.

The importance of grade is just as keenly felt, says Litton. Each time a grade is lowered, it is the same as taking off 60 pounds of weight.

SHEEP

In tests conducted by the Texas agricultural experiment station, range ewes flush-fed before and during breeding averaged 7.5 percent more lambs than those not flush-fed. Of seven groups tested, flush-fed ewes showed an advantage in increase of staple length in six

groups and higher condition scores in five.

Single tests were conducted in Tom Green, Pecos and McCulloch counties and two tests were conducted in both Kerr and Glasscock counties. At each location approximately ¾ pound of cottonseed meal or pellets was fed per ewe per day, beginning 21 days before the start of breeding and continuing for 14 days into the breeding season. The ewes fed were selected at random and were maintained separately at least through breeding and lambing. In no case were the flushed or control groups smaller than 100 ewes.

Response of ewes to feeding varies considerably in lamb crop percentages. Extremes ranged from 9.3 percent fewer lambs among the flushed ewes to 26.7 percent more. Considering all of the tests, the average lamb crop for the flushed ewes was 94.94 percent as compared to 87.43 percent for the non-flushed ewes. The cost of flushing could be offset by weaning approximately six additional lambs per 100 ewes.

Those interested in additional information on these tests may obtain it by requesting a copy of PR-2162 from the Agricultural Information Office, College Station, Texas.

Shearing ewes prior to breeding may bring earlier lambing under certain conditions, University of Kentucky experiment station animal husbandry researchers have found.

P. G. Woolfolk, sheep researcher, last season ran four groups of ewes sheared prior to breeding. In two of these groups, he found, average lambing dates were a week to three weeks earlier. In the other groups, there was no appreciable difference.

Woolfolk used the following groups:
1) Two-year-old Texas ewes of Suffolk cross origin; this group's lambing date average was no better than the un-sheared group (composed of similar ewes) and the lambing percentage was no better.

2) A group of Hampshire cross Montana two-year-old ewes; the sheared ewes lambed about three days sooner on the average and had a slightly better lambing average.

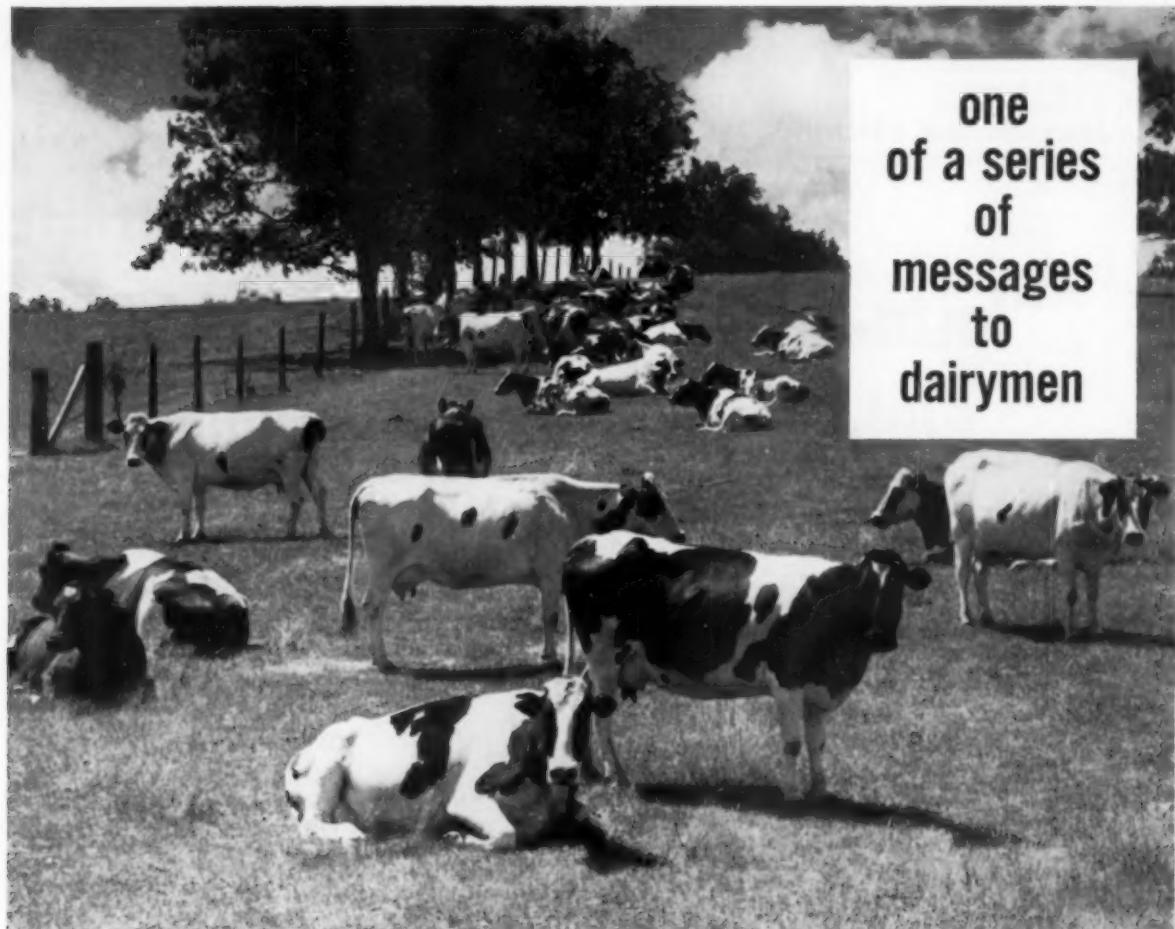
3) Hampshire cross yearling Montana ewes; these animals lambed about three weeks earlier than the un-sheared ewes; lambing percentage, however, was about the same.

4) The last group, Hampshire-cross aged Montana ewes, averaged a week earlier lambing and slightly better lambing percentage.

Woolfolk said the shearing did not help or hinder average daily gains in the test. Likewise, the twice annual shearing did *NOT* bring extra wool. But, he says, the test indicates that shearing might be beneficial to improve breeding performance of Montana ewes.



USS feedlot fence system is examined by P. G. Strom, American Steel & Wire Div. (right) and T. L. Willrich, extension agricultural engineer for Iowa State University.



one
of a series
of
messages
to
dairymen

Greater antibody build-up to fight bacterial infection

'Biotized' bacterins represent a significant advance in the prevention of bacterial diseases. Each 2 cc. dose contains approximately three times the number of bacteria normally present in the conventional 5 cc.-dose product. This increased concentration is achieved by means of a newly-developed process, enabling Fort Dodge Laboratories to provide the livestock industry with another highly effective infection-fighting weapon. These bacterins— aids in the control of mastitis, calf scours, keratitis or pneumonia—are now available through your veterinarian.

*—that's what new
'Biotized' bacterins
give with each*

2 cc. dose



BIOTIZED* bacterins

FORTIBAC*—Coli-staph-strep Bacterin
BOVIBAC*1—Mixed Bacterin No. 1
BOVIBAC 2—Mixed Bacterin No. 2
BOVIBAC 3—Mixed Bacterin No. 3

*Trademark, Fort Dodge Laboratories, Fort Dodge, Iowa

Stay on the tractor

"Insta-Hitch" does the job fast —without pushing and pulling



Back up, catch hook, lock in seconds with Insta-Hitch, a time and temper saver.



Tractor driver picks up rotary cutter and places in truck without getting down from tractor.

SOMETHING for ag leaders to note this month in the farm equipment field is a new method of hooking up implements from the tractor seat.

The Insta-Hitch, made by Powell Pressed Steel Products, Hubbard, Ohio, is a natural extension of the three-point hitch. It makes it possible to hook up implements *without getting off the tractor seat*. And yet it is so simple and fool-proof there is very little that can go wrong.

Inventor Cliff Stuart designed this hitch in the form of a triangle so that it works just as effectively on uneven ground. There are two parts — one mounts on the tractor, the other on the implement. The tractor is backed to the implement, the hitch lowered so that the hook catches the matching unit on the implement. When the hydraulic arms are raised, the two parts of the hitch close into position. Raising the lever locks the couplings together—and that's all there is to it.

Contrast this to present day methods of pushing and pulling to get implement properly lined up to tractor, pushing hydraulic arms to get them properly fastened to the implement, and sometimes smashing or pinching fingers and then fussing and fuming with the proper alignment of the top point of the hitch—and you'll wonder why someone didn't think of it sooner.

In addition, the Insta-Hitch is adapted to a front mounted loader to which buckets, blades, or pallet fork lifts can be quickly attached or detached. A front mounted loader with Insta-Hitch makes child's play out of loading or unloading implements on a truck for transport.

The grower who changes implements frequently will find the Insta-Hitch a time and temper saver. Also growers who move implements from one farm to another will find this new hitch of advantage.

"why didn't somebody think of this before?"

Time after time, last season, we heard this typical reaction to Nitragin custom soybean inoculation from *both* farmers and seedsmen.

Farmers willingly paid the small extra charge to have their seed beans custom inoculated. Now, they could get the extra two or more bushels per acre from effective soybean inoculation *without* the extra work and bother of on-the-farm, planting-day application.

MORE CUSTOM INOCULATION IN 1961

Even more farmers will want custom inoculation in 1961 — more dealers will offer the service. This is fine, *IF* custom operators will take the necessary steps to insure a genuinely thorough job. The bacteria must stay alive on the seed and bring about effective nodulation. Unfortunately, this requires *more* than just putting ordinary inoculant on seed in advance of planting day — *otherwise we would have bad custom inoculation years ago!*

NITRA-COAT MAKES IT POSSIBLE

The "break-through" that made custom inoculation a practical reality came when the Nitragin Company developed Nitra-Coat. This protective sticking agent for use with legume inoculants helps hold the inoculant to the seed, protects the bacteria and keeps them alive and vigorous. Soybean seed may be effectively inoculated months ahead of planting when seed are kept cool.



ALWAYS MAKE THESE RECOMMENDATIONS

Custom inoculation is inexpensive, saves valuable time on planting day and gives the farmer results he can measure — more bushels per acre.

To insure best results from custom inoculation, these recommendations should be followed:

1. Select an inoculant of known high quality — one with GUARANTEED high bacteria content.
2. Use Nitra-Coat sticking and protective agent to help hold the bacteria to the seed, nourish them and protect them to keep them alive and vigorous.
3. Apply inoculant slurry thoroughly, so that each seed is covered.
4. Store inoculant and inoculated seed in a cool place to protect the bacteria.

NOW... for the farmer who wants to do his own inoculating...



NEW DOUBLE-SIZE NITRAGIN SOYBEAN PACKAGE CONTAINS TWICE AS MUCH INOCULANT

- ★ **APPLY WITHOUT WATER**... new double-size package provides the extra inoculant you need — use as it comes from the package, or...
- ★ **APPLY WITH WATER**... and the new double-size package inoculates twice as much seed. Apply as a slurry with water and get the biggest inoculant value on the market.
- ★ **FOR PREINOCULATION**... apply as a slurry with NITRA-COAT months before planting with assurance of full effectiveness when inoculated seed are properly stored.

NITRAGIN®
SINCE 1898

THE NITRAGIN
COMPANY
3265 W. CUSTER AVE.
MILWAUKEE 9, WIS.

Write for free Nitrogen Cycle Chart and list of other educational materials.

SUFFOLK SHEEP

AMERICA'S TOP BREED

SUFFOLK rams sire superior market lambs.

SUFFOLK ewes raise more pounds of lambs.

SUFFOLK lambs are sturdy, gain rapidly.

For more profits—raise Suffolks. For free booklet and list of breeders, write:

NATIONAL SUFFOLK SHEEP ASSOC.

P. O. Box 324CA Columbia, Missouri

VACCINATE and BE SAFE!



Dependable Protection!

COLORADO brand Serums and Biologicals have a trouble-free record for over a quarter century in controlling livestock diseases. Produced under Government supervision.

VACCINES and SERUMS

for Cattle, Swine, Horses, Sheep, Turkeys

Local Dealer Nation Wide Distribution

COLORADO SERUM CO.

4950 YORK STREET • DENVER 16 COLO.

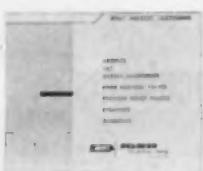


FREE DELAVAN SPRAY GUIDE

Delavan has designed this 'slide rule' spray guide as a ready reference for agricultural spraying authorities. With the guide you can quickly determine how many gallons per hour specific nozzles require, and the pressures needed for a given application rate.

DO YOU CONSIDER NOZZLES WHEN YOU GIVE SPRAYING ADVICE?

Inadequate nozzles can make good spraying equipment look bad. Delavan manufactures a full line of nozzles and accessories—a quality line, designed especially for agricultural applications. Let us send you a catalog with facts about Delavan equipment. Then, compare Delavan with others. When you give spraying advice be sure to consider the advantages Delavan nozzles can offer.



DELAVAN
Manufacturing Company

WEST DES MOINES, IOWA

- Please send me the free Delavan Spray Guide.
- Please send me Delavan's full line catalog of spray nozzles and accessories.

Name _____

Street Address _____

City _____

Zone _____ State _____

QUESTION of the month

Occasionally the editors are asked for information on a subject which appears to be of sufficient general interest to warrant special editorial treatment. This month's "Question" is:

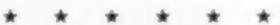
Q.—Sometimes we hear of a vo-ag teacher spending 50 per cent of his time teaching farm mechanics, while another may be spending only a third of his time, or less, teaching it. What new developments, if any, have taken place in official thinking concerning how much time a vo-ag teacher should spend teaching farm mechanics? What is a good guide line to follow on this?

COUNTY AGENT & VO-AG TEACHER received the following answer from Dr. W. T. Spanton, Director, Agricultural Education Branch, Office of Education, Department of Health, Education and Welfare, Washington, D. C.

A.—"While I do not claim to be an authority in this particular field by any means, I have discussed the matter with our Farm Mechanics Specialist, Mr. Hollenberg, and we are both agreed that the amount of time should and will vary from one community to another and particularly from one State to another, depending upon their individual needs and characteristics.

"Generally speaking, I should say that in most communities there should certainly be a need of not less than 30 per cent of the time to be devoted to farm mechanics, but I would not recommend more than 50 per cent in any case. I presume that about 40 per cent would be a good average to stress for the country as a whole.

"Farm mechanics is more important in our modern mechanized agriculture than ever before, but at the same time we have responsibility for keeping the program in balance with the teaching of other phases of agriculture, such as animal husbandry, horticulture, poultry production, soil conservation, fertilizers etc."



4-H PENETRATES IRON CURTAIN

Four-H will take a first look inside Communist countries in 1961 through the International Farm Youth Exchange. Yugoslavia, and possibly Poland, will participate in IFYE for the first time.

Country assignments for the 1961 program have been announced for 115 U. S. rural youth to be exchanged with young people from 43 other lands.

The farm youth exchange is a 4-H club people-to-people program conducted by the Cooperative Extension Service and the National 4-H Club Foundation. Forty states are participating this year.



take costly CHANCES

SWITCH IMPLEMENTS AUTOMATICALLY NO "MAN-HANDLING" NEEDED

All 3-point and tanged equipment, with or without PTO can be attached and detached in seconds. Just back into the implement, hook, drive away with the implement secure and ready for work. PTO shafts are automatically and instantly coupled.

Insta-Hitch eliminates the hazards of "man-handling" heavy equipment into place. No longer is it necessary to run the risk of serious injuries to you, your son or your employee. The dangers and time lost because of mashed feet, wrenched muscles, hernias and skinned knuckles are gone forever with the Insta-Hitch System.

Insta-Hitch is available for loader attachments. Buckets, forks, blades, fork lifts and other attachments are instantly changed with the Insta-Hitch System. Transporting and loading of rear equipment is also handled with your present loader. Saves time and labor with complete safety.

SEND FOR COMPLETE
INFORMATION
NO OBLIGATION

INSTA-HITCH
POWELL PRESSED STEEL
HUBBARD, OHIO

Please send me at once complete detailed information on Insta-Hitch.

NAME _____

ADDRESS _____

CITY and STATE _____



THE HITCH
that changes
implements in
seconds . . . with
SAFETY



INSTA
PATENT PENDING
MANUFACTURED BY
POWELL PRESSED
STEEL COMPANY
HUBBARD, OHIO

Manufactured in Canada by McKee Bros. Ltd., Elmira, Ont.

ag leaders washington (Continued from page 10)

USDA in this program have been taken out from under their respective agency heads and put under the direction of a Food for Peace Director who administers the program from the White House.

The importance of the P.L. 480 program as a defense arm of the U. S. became more apparent when the outgoing Secretary of Agriculture called for an additional \$1.5 billion a year, bringing the total to \$3 billion a year. But the Budget Bureau blocked this. The Food for Peace advisers to the new administration also recommended raising authorization for the program to \$3 billion. Both administrations want from \$1.3 to \$2 billion to finish out the program the rest of this year!

Planners consider the cost of \$3 billion a year cheap compared to the more than \$40 billion a year spent on other types of defense. Peace and cold war strategists on top levels haven't made much of the point publicly yet, but food produced by American agriculture is the strongest possible weapon for use in those areas where neither side in the cold war can find any intelligent need for missiles, rockets or bombs.

THE ROLE of the county agent and vo-ag teacher is also expanding as agriculture changes. The tendency of students from farming areas to leave what used to be called agriculture calls for more, not less, instruction by the vo-ag instructor. As agricultural groups are organizing to gain a better bargaining position for themselves in the market place, it means that agriculture is going to the city. It is less a case of the city or other occupations gobbling up agriculture.

The vo-ag teacher and county agent will have to widen their horizons to meet the new demands and changes in agriculture, officials say. But a size-up of plans afoot for agriculture and its growing importance in the national economy suggests that the role of the county agent and the vo-ag teacher will increase in importance at the same time.

★ ★ ★ ★ ★ YORKSHIRE OPEN GILTS PLACINGS & REASONS 1-2-3-4

This class of Yorkshire gilts includes four individuals that would all make satisfactory individuals for either a breeding or commercial sow herd. However, there are definitely enough differences among the gilts to make the class placeable and point out some im-

portant points to look for in selecting gilt replacements for your herd.

We started the class with No. 1, considering her to be the meatiest, best balanced, soundest gilt in the class. She shows good bone, a sound set of feet and legs, a prominent, well spaced underline, and a clean, feminine head. She carries her depth very well from front to rear being deep through the heart and carrying down well in the rear flank. She shows a good, high tail setting and carries down into a plump, firm, meaty ham. She shows good spread over her top indicating a large loin eye, and carries her width uniformly from front to rear. We would like to see her carry down perhaps a little deeper in her ham and standing more correctly on her right hind leg as viewed from the rear.

We placed No. 1 over No. 2 because she shows more meatiness throughout, shows more quality in her haircoat, and has a little more general eye appeal than No. 1. No. 2 also shows some tendency to break away in her rear udder as she grows older as shown by the unevenness of the rear part of her underline.

We felt No. 3 was a very attractive, well balanced gilt with excellent eye appeal. However, she is weak on her front pasterns and toes out in both front feet. We placed No. 2 over her because she is sounder on her feet and shows definitely more width and muscling through her ham as viewed from the rear. We would give the advantage to No. 3 in being more attractive and feminine about the head and having a more desirable tail setting.

We placed No. 4 at the bottom of the class, but feel that she is still quite an acceptable type of gilt. She definitely lacks the smoothness and uniform width of the other gilts in the class when viewed from the rear. She shows definite weakness in all four pasterns and stands on the lightest bone of any gilt in the class.

The All New 1961 Spray Compatibility Chart ORDER NOW



- Compatibility of growth regulators.
- Compatibility of nutrient sprays.
- Many of the new organic chemicals and fungicides never listed before are included.
- New larger illustrated chart—easier to read.

50c

Order your companion Spray Safety Chart too!

A chart every grower should own—outlining the safe sure way to use spray materials.

50c

Order both charts—a \$1.00 value—for only 75c.

Quantity prices on request.

This offer good only in U. S. A.
and Canada. Coin or money
order must accompany each
order.

COUNTY AGENT & VO-AG TEACHER
Willoughby, Ohio

Enclosed is money or my check. Send compatibility charts
and/or companion spray safety charts to:

Name

Address

City

State



SWINE PRODUCTION

An educational movie on life-cycle swine management titled "Modern Trends in Swine Production" now is available from U. S. Steel.

The film concerns sound principles in breeding and feeding on the farm and is narrated by Bernard Ebbing, national authority on hog raising and breeding. Modern farrowing, nursery and finishing practices for raising hogs in confinement and on pasture are reviewed.

The 16-minute color film is available for showings without charge through United States Steel Corp., Pittsburgh Film Center, 525 William Penn Place, Pittsburgh 30, Pa.

TWELVE MONTH SUMMER

The richness and value of alfalfa as it grows in summer is captured and made available every month of the year, in dehydrated alfalfa. That's the theme of a new 15 minute film, "Twelve Month Summer," produced for the American Dehydrators Association.

History of alfalfa from ancient Arabia to modern feedlot is traced, and nutrient content of Dehy is evaluated in terms of its benefits to beef cattle, dairy herds, sheep, swine and poultry.

Centron Corp. produced the color film with the technical assistance of Joseph Chrisman, executive vice president of ADA.

Agricultural groups may obtain the film without charge for showing by writing the Farm Film Foundation, 1425 H Street, N.W., Washington 5, D.C.

THE 4-H LEADER

Dynamic role of the 4-H leader in guiding the youth of his community is presented in a new 16mm, sound, color film produced by the department of visual communication, University Extension, University of California.

Designed for use in a 4-H leader training and recruitment program, the film follows young Tom MacIntyre, a poultry rancher, through his first contact with 4-H to the ultimate gratification he feels through his work as a leader.

The film illustrates problems which 4-H leaders may encounter and shows how outside help is always available from such sources as other leaders, county farm advisors and the agricultural extension service.

Sales price of the 27-minute film is \$247.50. For rental prints, address Public Film Library, University of California Extension, Berkeley 4, Calif.



FREE FACTS

How to Succeed in
Today's Dairying with

Registered Guernseys!

Dairymen in your territory can earn highest net income with Registered Guernseys. Get all the facts—FREE—and you'll learn why... adaptable, easy-to-handle, efficient Guernseys are the key to highest net dairy profits... and the best choice for today's dairymen!

FREE LITERATURE Judging aids, pictures. Literature on Registration, "Profitable Dairying", and Golden Guernsey Milk Business.

WRITE TODAY—

The AMERICAN GUERNSEY CATTLE CLUB

Main Street, Peterborough, N. H.

Buffalo Turbine
Offers you the
Finest in Turbo
Sprayers & Turbo
Duster/Sprayers.



Use Buffalo Turbine Equipment For



Model CHS

- Orchards
- Soil Stabilization
- Row Crops
- Groves
- Seeding
- Baffle Trans
- Enzyme Deodorizer
- Fertilizer

BUFFALO TURBINE

Agricultural Equipment Company, Inc.
50 Industrial St., Gowanda, N. Y.

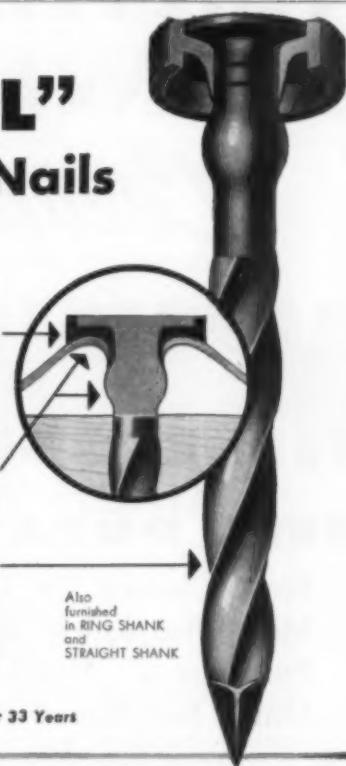
DENISTON "LEAD-SEAL" Metal Roofing Nails

GALVANIZED FINISH ONLY

LEAD SEAL—The only nail with lead just under the head and down the shank. When the nail is driven, the hole around the nail is plugged with lead and the break in the metal is completely covered, to form a perfect double seal.

TRIPLE LOCK—The only nail that has a locking bump. As the "bump" is forced through the sheet, the sheet springs back over the bump—this effectively prevents the nail from working out. The nail, lead, and sheet are solidly locked together.

DRIVE SCREW SHANK—The only nail that is driven on the steel head. Drive screw shank makes the nail turn and hold like a screw. It holds with a powerful, unyielding grip. Threads are deep and sharp because they are formed after galvanizing.



Accepted Standard of Quality for Over 33 Years

DENCO Lead-Head Metal Roofing Nails



BRIGHT OR GALVANIZED

6,000 pounds of pressure is used to compress the lead cold, both over and under the steel head of the nail as well as down the shank. The lead forms a perfect seal in the hole made by the nail. Heads will not "pop" off from expansion and contraction of roofing nor from wind vibration.

Shipped in 50 lb. cartons. Descriptive literature will be sent immediately upon request.

THE DENISTON COMPANY

4680 South Western Avenue • Chicago 9, Illinois

IN CANADA: EASTERN STEEL PRODUCTS CO., LTD., PRESTON, ONTARIO



FREE CATALOG
of Farm and Shop Supplies

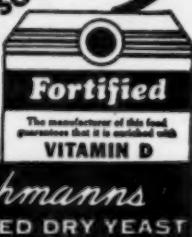
Ask for Catalog No. 73
—322 pages listing
thousands of farm
and shop supplies.
Buy from one
source . . . at
moneysaving
prices. Prompt
shipment.



NASCO, Inc.

Fort Atkinson, Wisconsin
P. O. Box 6895, Denver 16, Colorado
P. O. Box 1409, Santa Barbara, California

SO MUCH DEPENDS
UPON SO LITTLE



NORTHERN GROWN

BY GROWERS WITH INTEGRITY,
KNOW HOW AND SUPERVISION

Certified

MINNESOTA

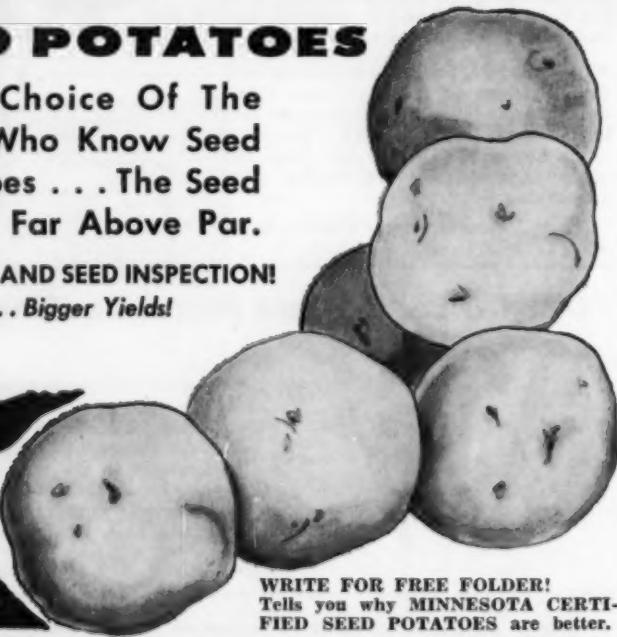
SEED POTATOES

First Choice Of The
Men Who Know Seed
Potatoes . . . The Seed
That's Far Above Par.

STRICT FIELD AND SEED INSPECTION!

Better Fields . . . Bigger Yields!

THE CENTER
OF
CERTIFIED
SEED
Production
POTATOES
FAR ABOVE PAR!



WRITE FOR FREE FOLDER!
Tells you why MINNESOTA CERTIFIED
SEED POTATOES are better.

STATE OF MINNESOTA DEPT. OF AGRICULTURE

DIVISION OF PLANT INDUSTRY, DEPT. 5

UNIVERSITY OF MINNESOTA — SAINT PAUL CAMPUS — SAINT PAUL, MINN.

vo-ag news

A RECORD OF LONGEVITY

After 41 years of service to vocational agriculture, the community and the Northwest Washington Fair, Fred Rockey, Lynden, Wash., has retired.

A check of all available records in the state has failed to equal this mark for longevity in vocational agriculture teaching, reports Glenn Ziegler, vo-ag instructor, Mt. Baker High School, Deming, Wash.

Fred's fellow workers will remember him as the toughest competitor for any contest on the calendar. His dairy judging teams were perennial winners, and if you could beat Lynden in potatoes or crops you would be assured of a banner, usually a blue one.

Glenn Ziegler says, "We can safely say that Fred Rockey has established more records in vocational agriculture than did the Yankees in the last world series, but Fred came out a winner."

AWARD FOR 40 YEAR'S SERVICE



J. E. Hill, director of vocational education in Illinois, presents a 40-year service award to Walter Baysinger of Streator at the annual banquet of the Illinois vo-ag teachers. Baysinger is the third teacher in Illinois to receive this award. Hill received the same award recently.

SOLVING "POPULARITY POLL" PROBLEM

Election of Chapter FFA Officers many times turns into a popularity poll and boys are selected who neither are deserving of the honor nor are interested in carrying out their duties as officers. The Scotland, South Dakota FFA Chapter has solved this problem the past few years by having candidates meet several requirements before being elected to office. About one month before the election meeting, the present officers pass out "Officer Application" forms to all those who are interested in becoming officers for the coming year. These applications ask a few questions such as:

- 1) Office or offices applying for
- 2) Offices held in other organizations
- 3) Reasons why you think you would make a good officer in the FFA
- 4) What do you think you could do as an FFA Chapter Officer?

A committee composed of the present

senior officers and members holding the State Farmer Degree reviews and evaluates each application. Each candidate is interviewed for ten to fifteen minutes by this committee which asks the individual many questions about the FFA history and organization. Upon completion of all interviews the committee then nominates candidates whom they think best qualified and most capable for the different offices.

There are usually other nominations for each office the night of election but this procedure certainly gives more interest to the election of the best possible boys for each office.

NVAA DISTRICT CHAIRMEN

Newly elected Nebraska Vocational Agriculture Association chairman are Severin Sorrenson, District 2, from Nebraska City; John Hill, District 4, of Randolph; Neal Scott, District 6, of Franklin, and Don Frerichs, District 8 of Kimball.

TEN YEAR CLUB MEETS

The Lundy ranch in Sow Belly Cannon, Harrison, Neb., was site of the annual NVAA Ten-Year Club meeting and banquet this year. High points of the visit were the scenic trip to Harrison, viewing of the trout-rearing pond and review of the herd of breeding shetlands which Dean Lundy has at his ranch. Lundy, recipient of Ak-Sar-Ben 20-year medal this year, has been instructor in the Harrison vo-ag department for 20 years.

★ ★ ★ ★ ★ CIBA FORMS NEW DIVISION

A new Animal Health Marketing Division encompassing both veterinary and feed additive operations has been formed by Ciba Pharmaceutical Products, Inc.

WHAT'S COMING UP

March 4-11—National 4-H Club Week.
March 6-8—Midwest Regional Turf Conference, Purdue Memorial Center, Lafayette, Ind.
March 7—Nebraska State Dairymen's Association, Keim Hall, College of Agriculture, Lincoln.
March 21-23—Agricultural Progress Days, Cornell University, Ithaca, New York.
March 28-30, Agricultural Science Youth Program, Cornell University, Ithaca.
April 22-28—National 4-H Club Conference, Washington, D. C.
April 23-25—Seventh Annual American Angus Conference, University of Georgia, Athens.
May 5-6—Student Agricultural Exposition, Virginia Polytechnic Institute, Blacksburg.
May 7—Rural Life Sunday.
June 11-14—American Dairy Science Association Annual Meeting, University of Wisconsin, Madison.
July 7-8—Northwest Section, American Society Range Tour, Okanogan, Wash.
July 16-18, Joint Meetings of Western Section, American Society of Animal Production, and Western Division, American Dairy Science Association, University of Idaho campus, Moscow.
November 26-30—National 4-H Club Congress, Chicago.



Recommend
COLORADO CERTIFIED SEED
for That Extra Ton of Feed per Acre

The selection of improved strains of forage crops, and the development of hybrids and synthetics with "tailor made" production characteristics and resistance to insects and diseases, is possible today as never before in our history.

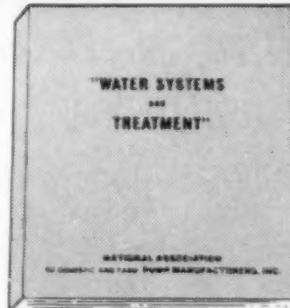
Colorado Certified Seed makes these improved strains available for use—produced under field and plant conditions which generate varietal purity.

ONLY BY USING COLORADO CERTIFIED SEED
CAN YOU GET THE VARIETY NEEDED

For more information write Dept. AG-544

COLORADO ADVERTISING AND PUBLICITY COMMITTEE
DENVER 2, COLORADO





NOW READY



latest
authentic
Information !

"WATER SYSTEMS and TREATMENT"

170-PAGE
HANDBOOK

plus 6 news letters \$2.00

SET INSTRUCTOR'S CHARTS \$7.50
(14 illustrations)

HANDBOOK IN QUANTITIES \$1.50 ea.
for classrooms

The Association will assist in conducting 2-day
Water Treatment CLINICS.

The supply of above literature is limited—ORDER NOW!

**NATIONAL ASSOCIATION
OF DOMESTIC AND FARM
PUMP MANUFACTURERS, INC.
20 WEST STREET, ANNAPOLIS, MD.**

FRED L. RUPP
Product Sales Manager
Galvanized Steel Sheets
Granite City Steel Company



“AG LEADERS SHAPE THE FUTURE OF FARMING”

says Fred L. Rupp, Product Sales Manager, Galvanized Steel Sheets, Granite City Steel Company, Granite City, Illinois, producers of patented Strongbarn galvanized steel roofing and siding.

“County agents, vo-ag teachers and other agricultural leaders provide a great service to agriculture and to our nation. They teach, advise, encourage. They are demanding, practical, visionary. And they are a vital grass roots link in our chain of communication to the farmer.

“Small wonder we select COUNTY AGENT & VO-AG TEACHER to tell how to build better farm buildings with Strongbarn. We regard this publication as a medium of influence, and use its pages to provide ag leaders with information they can use in their contacts with farmers and students.

“Granite City Steel Company believes in the job these men are doing to shape the future of farming. We say a simple and sincere ‘thank you’.”

COUNTY AGENT VO-AG TEACHER

“the magazine for agricultural leaders and advisors”

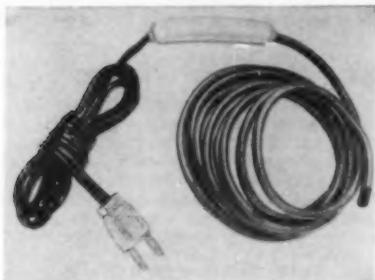
new ideas and products

A WATER WARMER

From Connecticut comes a new poultry water warmer for use in shallow troughs. The warmer, automatic or regular, keeps the water at 50° F. which makes for healthier flocks and up to a dozen extra eggs per hen.

The new warmer consists of a heater, rated at 10 watts per foot on 120 VAC, encased in tough Geon plastic, a 4-foot cord and plug.

Warmers are available in lengths of

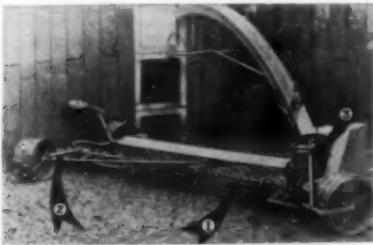


5, 10 and 15 feet, and if you will **circle 51** on service cards, we will see that you get further information. Or, you could write the Smith-Gates Corporation, Farmington, Conn., and they will be delighted to send full facts.

THREE POINTS OF INTEREST

I should really say three points of particular interest, for the new line of high capacity silo unloaders that I saw demonstrated last week have many features that farmers all over the country will be interested in. The arrows in the picture indicate the parts that were pointed out to me.

For instance, No. 1 is the new gathering chain guard which not only assures the farmer additional safety, but longer life expectancy for the gathering chain will result through the addition of a re-



turn guide and the use of a No. 80, heavier-duty industrial chain.

No. 2 emphasizes the new spring-tensioned wall cleaner, and No. 3 points out the high capacity blower that permits blowing all types of silage at greater capacity and with lower power.

If you will **circle 52** on service cards or write to Patz Company, Pound, Wis., you can get further information.

NEW, VERSATILE

Here's good news for farmers who grow diversified crops and whose operations do not justify investing in a



self-propelled combine. The recently developed, new pull-type combine can be equipped with a two-row corn attachment, making it possible to spread the investment in the pull-type machine over the same wide variety of crops as a self-propelled unit.

Bix Beiderbecke, of John Deere & Co., Moline, Ill., will be glad to tell you more about this revolutionary combine or you can just **circle 53** on service cards and we will see to it that all the facts are placed before you.

TEN MINUTE TEST

In just that short time, it's possible to make soil tests that are accurate and reliable. Knowing what the soil needs and the right formula of fertilizer to apply can not only increase yields tre-

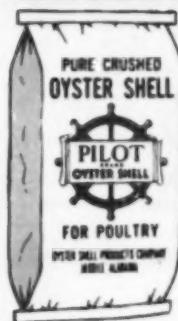


mendously but save money spent on unneeded fertilizer.

The deluxe Sudbury Soil Test Kit comes in a strong welded steel chest with charts and instructions showing the needs of 225 different crops. Users have increased their yield as much as 500% and saved hundreds of dollars doing it.

Using the "right" amount of nitrogen, phosphorus and potash is almost as important as applying fertilizers. For further information, **circle 54** on service cards or write Nelson Latremore, Sudbury Laboratory, Dept. CA, Sudbury, Mass.

Profit Pointer



PILOT BRAND OYSTER SHELL
helps you get
more eggs with
stronger shells

There's no question about it. PILOT BRAND Oyster Shell helps you get maximum egg production . . . helps you make more money with your flock. It's the ideal egg-shell material . . . almost pure calcium carbonate. Low cost, too. It pays to keep PILOT BRAND in the hoppers the year 'round.

In the bag with the big blue Pilot Wheel—at most good feed dealers.



Oyster Shell Products Company
Mobile, Alabama

When writing advertisers
please mention
COUNTY AGENT & VO-AG TEACHER



RAIN BIRD
... sprinkles circles
around other sprinklers!

Every major development pioneered by Rain Bird has been imitated but never duplicated by other sprinklers. Only Rain Bird gives you bridge-type construction, to insure extra durability . . . minimum of moving parts, to insure less wear and least maintenance. Rain Bird also gives you the TNT bearing for top flight performance where air or water-borne abrasives prevail. Write nearest office for latest engineering data.

NATIONAL RAIN BIRD SALES & ENGINEERING CORP.
627 N. San Gabriel Avenue, Azusa, California
RAINY SPRINKLER SALES
609 West Lake Street, Peoria 5, Illinois

booklet-bulletin reviews

Publications listed are furnished free of charge to readers of County Agent & Vo-Ag Teacher

Audio-Visual Aids

55—WALKIE-TALKIE

Heath Company is offering a catalog describing its low-cost Walkie-Talkie which can be used up to a mile away. The unit is as easy to use as a telephone and is completely portable. Its 4-transistor circuit features fixed-tuned super-regenerative receiver with inherent noise-limiting properties. The crystal-controlled transmitter uses maximum allowable input and optimum efficiency for strong signals. One battery lasts up to 75 hours. If you're interested, just

CIRCLE 55 ON SERVICE CARD

56—NEW IDEA BOOKLET

The booklet, *Treasure Chest of Audio-Visual Ideas*, is available from Victor Animatograph Corp., Div. of Kalart, manufacturers of 16mm sound projectors. Most popular of their new projectors is Model 70-15 equipped with 15-watt amplifier and door-mounted speaker. If you'd like the booklet,

CIRCLE 56 ON SERVICE CARD

57—35MM PHOTOGRAPHY

A six-page booklet on the "hows" and "whys" of 35mm photography has been released by Eastman Kodak. If you'd like to receive a copy of *Handling 35mm Magazines and Cameras*,

CIRCLE 57 ON SERVICE CARD

58—POCKETPHONE

Globe Electronics is offering literature on a Pocketphone two-way radio that is no wider than a pack of cigarettes and less than twice as tall. Plug-in earphones are available if surrounding noise is a factor. If you would like information on this new product,

CIRCLE 58 ON SERVICE CARD

Chemicals

59—ALFALFA PEST CONTROL

Malathion—a phosphate insecticide—takes dead aim on alfalfa weevil and aphids without creating residue problems. Manufactured by American Cyanamid Company, it can be applied as a spray or dust with ground equipment or by plane. If you'd like to learn more about this effective and economical insecticide described in *Malathion Handbook*, just

CIRCLE 59 ON SERVICE CARD

Crops and Soils

60—PLASTIC MULCH

Would you like to learn more about the amazing results growers have had using plastic mulch to prevent weed growth, maintain moisture in the soil, and keep the ground warmer on cool nights? Science Products Co. will send literature. Just

CIRCLE 60 ON SERVICE CARD

Irrigation

61—PIPE REPAIR

ASC End-Gard, a new pipe end to repair aluminum tubing, has been introduced by Aluminum Supply Company Tubing Division, Inc. This strong, reinforced pipe end can be used either to repair damaged irrigation pipe ends or to reinforce old, used pipe ends in all sizes. Further details will be sent to you if you

CIRCLE 61 ON SERVICE CARD

62—IRRIGATION AIDS

Dragon Engineering Co. has pamphlets available on its new irrigation sand extractor and new chemical proportioner for sprinkler irrigation pipe lines. If you would like to receive copies,

CIRCLE 62 ON SERVICE CARD

New Products

(See page 45)

51—A Water Warmer

52—Three Points of Interest

53—New, Versatile

54—Ten Minute Test

63—PUMPING UNIT

A new irrigation pumping unit, the Titan, has been added to Hale Fire Pump Company's line of irrigation pumping units. It is capable of heads up to 300 feet (130 psi) or capacities up to 2600 gpm on a 10-foot actual suction lift. For more detailed information,

CIRCLE 63 ON SERVICE CARD

Livestock & Poultry

64—QUALITY EGGS

Oyster Shell Products Company is offering a new folder on Pilot Brand Oyster Shell which tells how to produce more eggs with stronger shells. It explains the importance of feeding hens a sufficient amount of calcium carbonate to produce quality eggs, and will be sent to you if you

CIRCLE 64 ON SERVICE CARD

65—DISPLAY INCUBATOR

Information on how to build a low-cost midget display incubator is available from Lyon Rural Electric Company. The company manufactures kits which provide all the electrical parts—including a low-wattage element, reliable thermostat, pilot light, etc. You construct a simple wooden box with a glass top and front. This makes a wonderful class project. For more details,

CIRCLE 65 ON SERVICE CARD

66—PIPOVAX DATA

In some tropical countries and in many sections of the United States, fowl pox infections have caused severe economic losses in chickens and control has been difficult. Now a new vaccine called Pipovax has been developed by American Scientific Laboratories, Inc., which provides protection for at least 32 weeks when chicks are vaccinated at a day of age. For a more detailed report on this and other facts about the new vaccine,

CIRCLE 66 ON SERVICE CARD

67—FEEDER AND WATERER

Chore-Time Equipment, Inc., has introduced a new concept in automatic feeding and watering. It is ceiling-suspended equipment which allows free bird movement and has an electro-guard anti-roost feature. For more information on the Chore-Matic poultry feeding and watering system,

CIRCLE 67 ON SERVICE CARD

68—BULK MILK COOLER

Eliminate the need for a separate releaser unit or milk pumps by using this pipeline milking system for bulk milk cooling and storage. It is also convenient for use with pail type milkers and milk transfer systems. Universal National Cooperatives, Inc., Milking Machine Division, will send you their catalog on Universal Supermatic pipeline milking systems if you

CIRCLE 68 ON SERVICE CARD

69—LIVESTOCK FINISHING

Synovex-S for steers and Synovex-H for heifers, natural hormones for feeder calves, will give you up to 20% more meat from your feed and $\frac{1}{2}$ pound extra weight gain per head per day. Before you fatten your next lot of cattle, find out more about Squibb's safe, natural hormones by reading their booklet, *More Profitable Livestock Finishing*. For a copy, just

CIRCLE 69 ON SERVICE CARD

70—POULTRY EQUIPMENT

Keen Mfg. Corp. is offering three free bulletins on their poultry equipment which is designed to save time and cut costs for poultrymen. They will be happy to send you information on their automatic egg collector with roll-away nests, automatic pit cleaner and automatic feeder, if you

CIRCLE 70 ON SERVICE CARD

71—WHY TERRAMYCIN?

If you would like to learn the advantages of feeding terramycin to increase egg production and feed efficiency as well as to fight bacterial infections and other poultry diseases, you'll want to obtain a copy of Chas. Pfizer & Co.'s booklet on the laying cycle management program, *The Stress-Rating Way to Extra Production*. Just

CIRCLE 71 ON SERVICE CARD

72—HOG FEEDER

Oakes Manufacturing Company, an operation of Food Machinery and Chemical Corporation, has announced the availability of a new extra heavy gauge steel round hog feeder that is manufactured in 40-, 60- and 80-bushel sizes. For complete facts on the new feeder presented in an illustrated catalog,

CIRCLE 72 ON SERVICE CARD

73—WHY TRISTAT?

A technical bulletin discussing the use of Tristat in the control of paratyphoid, pullorum and fowl typhoid in chickens and turkeys has been released by Dr. Salsbury's Laboratories. It includes extensive data on tests with this product which is added to the feed. If you'd like to receive further details,

CIRCLE 73 ON SERVICE CARD

Structures

74—BUILDING INSULATION

Zonolite Company is offering literature on the use of their masonry fill insulation in block or cavity walls. This material is non-settling, water-repellent, and easy-to-install. If you'd like further information,

CIRCLE 74 ON SERVICE CARD

Tractors & Equipment

75—COMPACT CRAWLER

A new catalog on crawler tractor farming has just been released by Allis-Chalmers Manufacturing Company. It describes their three-plow compact size crawler that gives "big crawler" performance. The company will also be glad to send you a copy of *Gateway to the Future*, which pictorially reviews their line of farm equipment. For copies of these catalogs,

CIRCLE 75 ON SERVICE CARD

76—GARDEN TOOLS

Seymour Smith & Son, Inc., is offering a new catalog covering their entire line of Snap-Cut garden tools. Complete specifications are given, including cutting capacities, overall size and performance characteristics of all pruning shears, grass shears, hedge shears, lopping shears and pruners. If you'd like a copy,

CIRCLE 76 ON SERVICE CARD

77—ROTARY CUTTER

Sidewinder rotary cutter, manufactured by Dealer Associates, Inc., is the only rotary cutter made with patented spinning tire drive. This unusual feature eliminates shock, saves your valuable tractor and reduces horse-power requirements. Descriptive literature will be sent to you if you

CIRCLE 77 ON SERVICE CARD

78—FARM LOADER

Literature is available from American Road Equipment Company on its 3500-pound capacity Model 20 Econolift farm loader. The loader is specifically designed to handle a hay basket attachment. A full line of attachments including grapplers, work platform, bulldozer and crane hook are offered with the loader. For further information,

CIRCLE 78 ON SERVICE CARD

79—HAY SPREADER-CONVEYOR

The farmer's haying operation truly has become a one-man operation with the development of Aerovent Fan & Equipment Co.'s automatic hay spreader and conveyor. This unit adapts to any elevator and is designed to fit into any barn. It distributes hay evenly and loosely across the mow so that air from a drier is easily forced through. For additional information, just

CIRCLE 79 ON SERVICE CARD

80—STRAPPING TOOLS

Twelve models of power combination strapping tools are described in the folder, *Signode Power Combination Strapping Tools*, offered by Signode Steel Strapping Company. A specification chart listing typical applications for each tool is also included. For your copy,

CIRCLE 80 ON SERVICE CARD

81—BUSH HOG

A brochure on Bush Hog lift and pull model rotary cutters is being offered by Bush Hog Manufacturing Co., Inc. These machines are designed for cutting oats, Johnson grass, Persian clover, Bermuda, Serica lespedeza and many other hay grasses. If you're interested,

CIRCLE 81 ON SERVICE CARD

82—EASY-TO-READ THERMOMETER

Abrax Instrument Corporation has literature available on its new thermometer with a large 6 1/2" dial and big, clear no-squint numbers. Range is -30° F. to 230° F. For further information,

CIRCLE 82 ON SERVICE CARD

Miscellaneous

83—"TRACING TRACES"

If you'd like to learn how to cope with the problems posed by FDA food additive regulations, you'll be interested in the literature, *Tracing Traces*, issued by Evans Research and Development Corporation, pioneers in trace analysis. For your copy,

CIRCLE 83 ON SERVICE CARD

84—WEED FREE LAWN

Amchem Products, Inc., will be pleased to send you their booklet, *Have a Weed Free Lawn*, which describes chemical weed control and contains illustrations of the most troublesome lawn weeds. This company is the originator of 2,4-D, 2,4,5-T and Amitrol weed killers. If you'd like to have this booklet,

CIRCLE 84 ON SERVICE CARD

85—FREE "AG" REPORTS

Doane Agricultural Digest, the teaching aid used by hundreds of vo-ag teachers, is offering its latest group of reports free. These include reliable facts, analyses and guidance on many phases of agriculture. For your free copies,

CIRCLE 85 ON SERVICE CARD

how to use the READER SERVICE CARD

- Circle number of literature you want
- Print or type your name, position, and address
- Clip and mail the Service Cards
- For your convenience service cards can be found on pages 19 and 35.

A Pictorial Series on How to Judge Cattle . . . Sheep . . . Hogs

Listed below are reprints of articles which have appeared in COUNTY AGENT & VO-AG TEACHER and which are available at 5 cents each.

Text accompanying the excellent pictures evaluates the conformation of the animals shown.

Angus heifers

Red poll aged cows

Red poll bulls

Guernsey cows

Jersey cows

Holstein cows

(three different classes)

Red polled yearling heifers

Brahman cows

Hereford steers

Polled Hereford heifers

Dorset ewes

Corriedale yearling ewes

Corriedale ewes

Yorkshire gilts

Senior spring Duroc gilts

Senior spring Duroc boars
(two different classes)

Berkshire gilts

Landrace boars

Yorkshire hogs

Duroc market barrows

Use the coupon for easy ordering. Include remittance with order.

Reader Service

COUNTY AGENT & VO-AG TEACHER
Willoughby, Ohio

Please send me the reprints checked above.
Remittance of is enclosed. (Reprints are 5 cents each.)

Name

Address

City State



**FREE
ENGRAVING
ON ALL
TROPHIES
AND
PLAQUES
PURCHASED
FROM
National
TROPHY SALES INC., Dept. CA-3
75 W. Van Buren St. Chicago 5, Ill.**

**SAVE MONEY
ON YOUR
AWARDS
BIG
FREE
1961 CATALOG
National**

IMPROVED NO. 2 BOSTROM FARM LEVEL



This Level has 12-Power Telescopio and is used and endorsed by Schools, Extension Service and Individual Landowners everywhere.

BOSTROM Levels are so simple anyone can operate them by following the direction booklet included with each instrument. Our No. 4 Contractors' Level and No. 5 Convertible Level feature 16-Power Telescopes. All Bostrom Levels are sold on the guarantee of satisfaction or money back. WRITE TODAY for literature, prices and name of our distributor near you.

BOSTROM-BRADY MFG. CO.
528 Stonewall St., S.W. ATLANTA 3, GA.

**FREE 80 Cup Automatic Urn
to your Organization
for handling only 60 items**

NO INVESTMENT NECESSARY...

If only 30 members each purchase one bottle of M-K Pure Vanilla and one can of M-K Black Pepper . . . This 80 Cup "Party Pot" Automatic electric Urn is yours free.

This is only one of our countless offers.

WRITE for details of this offer and Free Catalogue of other equipment and Money Raising plans for organizations . . . No obligation.

**MARION-KAY
PRODUCTS CO., INC.**
Dept. 85 Brownstown, Indiana

**NEW DOUGHNUT SHAPED
ELASTRATOR
GREEN RINGS**
For MODERN BLOODLESS Castration of Calves, Lambs, and decking of Lambs. Best ever made. Wide stretch . . . won't break . . . bites hard . . . GREEN color. Insist on these new rings. AT DEALERS or Postpaid. 50, \$1; 100, \$1.80; 300, \$7. Elastrator Instrument \$12.50.

CALIFORNIA STOCKMEN'S SUPPLY CO.
151 Mission St., San Francisco 5, Calif.

Complete catalog sent on request

county agents, usa

By VIC CAROTHERS



Oregon County Agents Association elected these officers at the recent annual meeting at Oregon State College: President—William K. Farrell, John Day; vice president—Earl F. Jaasy, Medford; secretary-treasurer—Kenneth C. Minnick, Corvallis, and assistant secretary—Wayne Roberts, McMinnville. Stockmen's cones, 40-year-old symbol of the association, are striped to indicate years of service.

AGENTS BUSY IN COMMUNITY ACTIVITIES

County agents are mighty busy people, but not too busy to be leaders outside of their office duties in numerous community and civic activities. Some data assembled on Alabama agents is probably typical of most Extension workers in all states.

Of 178 county and assistant county agents replying, 148 average 8.6 years as members of national and international service clubs; 102 have held offices in these clubs.

One hundred and nine county workers are Sunday School teachers and 84 hold offices in the church to which they belong. Eighty-three hold an official capacity in Boy Scout work.

The agents represent a total of 2,266 years in Extension work, and 453 years in other agricultural work—a 15.2 year average per worker. Range of service was from one month up to 43 years.

HONORED FOR INSECT CONTROL

Merton E. Libby, county agent, and Henry J. Cook, Jr., assistant county agent, both of Penobscot County, Maine, and Carl A. Rogers, county agent of Hancock County, Maine, re-



TV set is presented by Dr. D. E. Ullrich, Shell, to M. E. Libby, as award winners Henry J. Cook, Jr., and Carl A. Rogers look on with E. H. Lemire, of Shell Chemical.

cently were honored for crop pest control.

Libby and Cook won top state honors in a joint project tied to insect control in apple orchards. Second place went to Rogers for his work on insect control problems. Libby and Cook won television sets and Rogers received an electric drill set.

Shell Chemical Co. made the awards. Shell co-sponsors the contest with the National Association of County Agricultural Agents.

BANK COOPERATION AIDS 4-H

A 4-H member exchange program sponsored by two banks is helping promote the 4-H program in two states.

The Fayette National Bank and Trust Co., Uniontown, Pa., and Burlington Bank and Trust Co., Burlington, Iowa, are underwriting costs for exchange visits by three members from each state. They live in each others homes for 2 weeks.

Candidates must live on farms and local Extension has the responsibility of selection. The honor of being a delegate is much sought after and competition is keen.

John E. Creighton, associate county agent, Fayette County, says the program provides a recognition for club members who have outstanding 4-H records and provides incentive for other 4-H members.



New Wyoming County Agents Association officers receive congratulations from Orville Nichols (right), retiring president. Left to right are Nels Dalquist, secretary-treasurer; Wes Seamans, vice president, and Mel Lynch, new president for 1961.

N. D. NAMES OFFICERS

Larry Iverson, Valley City, Barnes County extension agent, was elected to head the North Dakota County Agents Association for 1961 at the recent annual meeting of the group.

Vice presidents are John Logan, Cando; Kermit Toepke, Watford City, and Walter Mattson, Beach. Alfred Bye, Bismarck, is secretary-treasurer.

Wayne Owens, Devils Lake; Maurice Ellingson, Dickinson; Vernon Nichols, Crosby, and Donald Hotchkiss, Williston, are directors.

LEADERSHIP DEVELOPMENT

Many a good idea or method springs from a casual remark. Such was the case with a highly successful Community Leadership Development Program in Courtland County, New York.

About a year ago at an executive committee meeting a retiring member was honored for his many years of service. In his response, the committee man said "It has been a pleasure to serve on the committee and as chairman of this committee, for through this experience I have gained confidence in myself and feel a little more at ease to get up before the people and express my viewpoints."

This testimonial to the real personal value of leadership training prompted consideration of a program that would be designed and conducted specifically for the purpose of leadership training. After consulting people in the rural sociology and extension teaching and information departments at Cornell, a "Community Leadership Development Program" was planned. The project would run one evening a week for five weeks, and would differ from the usual Extension activity in three ways:

1) It was co-sponsored by banks of the county. The \$200 appropriation financed materials, door prizes and refreshments, as well as awards for winners of a public speaking contest that followed the five-week course.

2) There was advance registration of participants so that enough materials could be prepared.

3) The course was offered to anybody who was interested; consequently a good cross-section of people participated.

Topics were "How to Think About the Need for Informed, Skilled Leadership in Today's Society," "How to be a Modern Leader," "How to Stand-Up, Speak-Up and Shut-Up," "How to Have People See What You Are Talking About" and "How to Accomplish Business in a Business Meeting."

There has been a high interest, and many requests for continuation of the program are coming in. This is a big challenge and opportunity for Extension.



Idaho County Agent's Association officers and directors. Seated: Gordon Dniley, vice president; Edward Koester, president; Merle Samson, past president, and Rex Gooch, secretary-treasurer. Standing: Directors Joe Holl, Frank Jacobs, Charles Thomas, Don Ingle and Glen Kunkel.

SCHOLARSHIPS TO AGENTS

Twelve \$50 scholarships to the three-week Winter and Summer Extension Schools, starting with January 1, 1961, are being offered to paid-up members of the Pennsylvania County Agents Association.

According to Joe Thurston, Westmoreland county agent and president of PCAA, there are two requirements: Recipients must be paid-up members of the association and must take the course in communications offered at the three-week Extension School they attend.

Funds for the scholarships were provided by the National Plant Food Insti-

tute. In appreciation, the board of directors of PCAA has agreed to furnish the Institute with at least 45 articles on soil fertility and fertilizer use in Pennsylvania.

AWARD TO COLO. AGENT

Chester Fithian, Morgan County extension agent, was awarded the certificate of recognition by the Colorado Crop Improvement Association for outstanding work in promoting production and use of pure seed.

Last year Morgan County had 5300 acres of certified seed production with 93 fields and 63 growers.

CLIP COWS REGULARLY WITH

Sunbeam STEWART CLIPMASTER ANIMAL CLIPPER

When cows are stabled, good sanitary practice calls for a regular clipping program. Clipped cows are easier to keep clean. Clean cows mean less sediment and a lower bacteria count resulting in higher quality, more desirable milk.

Leading health authorities say: "A regular clipping program means more wholesome milk. It is an essential step in the production of quality dairy products." Emphasize the advantages of regular clipping. It reduces sediment, lowers bacteria, avoids contamination and increases profits from production of cleaner, higher quality milk. No. 51, \$49.95 (Colorado and West, \$50.25).



No. 51



Sunbeam STEWART

SHEARING EQUIPMENT

ELECTRIC SHEARMASTER sheep shearing machine



No. 31-B

Fast, powerful, easy-to-use electric ShearMaster sheep shearing machine has many uses on every sheep farm. Ideal for shearing the farm flock, strays, tagging (crutching), facing, removing wool from dead sheep. No. 31-B. Only \$59.95 (Colorado & West, 60.25).

Sunbeam STEWART equipment is available through Hardware and Dairy Supply Stores. For catalog, write to:

Sunbeam CORPORATION Dept. 207,

5600 W. Roosevelt Rd., Chicago 50, Ill.

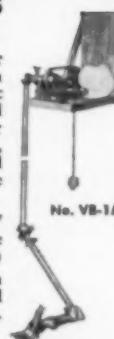
* Sunbeam, Stewart, Clipmaster, ShearMaster.

SHEARING MACHINES without engine or motor

For home shearing of larger farm flocks. Also used by custom shearers. Use your own electric motor or gasoline engine and save money. Uses either "V" or flat belt. Includes clutch bracket, choice of types of shafts, shipped without handpiece. Shown is one of many installations.

No. VB-2A with 3-section 126" shaft. Shipped without handpiece \$81.00. (Colo. & West, \$82.75)

No. VB-1A (Illustrated) with 2-section 67" shaft. Shipped without handpiece, \$69.50. (Colo. & West, \$71.00)



No. VB-1A

in summing up

What is Extension?

WHETHER you're a county agent or a vo-ag teacher, you may want to ponder this question with me.

What is meant by extension?

Last summer, I got a little worked up when it seemed to me that an FDA agent usurped the function of a county agricultural agent out in Colorado by "advising farmers" during a "crisis." It later turned out to be a rather *amusing incident* when the "possible 2,4-D ban on wheat" suddenly was called off by FDA authorities. (See August 1960 *in summing up*).

Since the same thing could happen again, let's get this question straightened out once and for all!

George Gehant, county agent at Madison, Minnesota, wrote me a letter, coming to the "defense" of Extension. I won't answer all his statements, because it wouldn't be possible in the space we have. Before discussing it, I'd like to get one thing cleared up:

What is extension?

No doubt you have thought about this many times! Vo-ag teachers and other ag leaders who find themselves in the business of advising farmers actually are engaged in "extension" of agricultural education of some sort. So let's see what Webster has to say about the word extension:

"Act of extending, or state of being extended."

Not very illuminating! So let's see what he says about the word "extend."

"To take by force, to seize!"

Sounds pretty *aggressive*, doesn't it?

His "second choice" is "to stretch or draw out; hence, to lengthen."

Personally, I like the first one!

Last August, I asked this question concerning the FDA agent: "Is his function education or enforcement?"

Checking with Capitol Hill experts it didn't take long to get the answer: "enforcement"—*period!*

"When a farmer violates a regulation, go out to his farm and take him by the collar!" That's the FDA agent's job.

But *education*—that's for the county agent, vo-ag teacher and other educators concerned with extending agricultural knowledge.

Here my county agent friend comes to the "defense" of Extension. He wrote:

"Several books could be written on "who and how county agents have and are being usurped in their function." A few examples might be Vo-Ag, SCS, ASC, FHA, farm magazines, newspapers, feed companies, drug companies, and officials of all kinds.

"My father used to say, 'Everybody wants to educate the farmer.'

"Most of these groups have to do some educating," he continues; "It's unavoidable; besides how can a few county agents do it all?"

The answer is they *can't*—and aren't expected to do it all. The farmer is fortunate to have all the help he has. But he doesn't need—and shouldn't be exposed to—the kind of "help" he got last summer in Colorado from the FDA!

And it's just bound to happen again unless county agents take the word "extend" a little more seriously.

THERE'S one more point that the county agent made in this letter that deserves study—and COUNTY AGENT & VO-AC TEACHER would like to once again go on record as strongly supporting this idea: "How about starting a huge (really big) program for sending county agents back to college or some kind of intensive training program for agents?"

Fine! But one important amendment is needed to make that motion really worthwhile:

Agents should become technically proficient in the specialized crop in their county!

Like the county agent said, "you can't know it all." But you can be the leading authority in your county on your major commodity.

If you're in a potato county, you should by all means take some graduate work during your sabbatical in potato growing. And so on.

There's a false idea being pushed in Extension that farmers should *request* help from the county agent. The latter shouldn't seek them out! Well, it might have worked 20 or 30 years ago, but it won't work in 1961!

COUNTY AGENT & VO-AC TEACHER would like to go on record as being against this philosophy, which is as outmoded as the coffee grinder.

Oh, I've been guilty of following this old extension line myself in the past. But times change. This is 1961.

How well I remember writing a testimonial about a good county agent friend back in the early fifties. It went something like this:

"As a county agent he has a habit of taking a seat in the back row most everywhere he goes. While the action is up front, it's a known fact that the tall, lean figure in the back of the room is really running the show."

Poppycock! It won't work in 1961. You not only must do the job—but you've also got to *get credit for it!*

COUNTY AGENT & VO-AC TEACHER doesn't have much patience for all this emphasis on graduate work in education, planning—or what have you. It might give you a lot of nickel knowledge on a lot of petty matters—and you might become quite an after dinner speaker or panel moderator. But farmers aren't impressed at all with nickel knowledge. They're playing for *big stakes*. And they need technical help more than anything else.

You read on this page in the December 1960 issue that some people have the idea that farmers now are turning to the college specialist. We don't buy that, but if it should come to that in the future . . .

. . . that specialist should be you. With the program COUNTY AGENT & VO-AC TEACHER is advocating it can be!

Seize the initiative this year and "go modern" in a modern agriculture!



Gordon L. Berg
Editor

CORN:

One application of aldrin protects corn against all major soil insects for an entire growing season—results in better stands of quality corn

Aldrin offers one-shot, low-cost control of cutworms, wireworms, white grubs and many other pests that reduce yields and quality, cause lodging and poor stands.

Read how aldrin works and how you can use it for greater yields.

IF YOU ARE trying to get bigger yields of better quality corn from every acre you plant, *soil insects must be controlled.*

There are at least 20 different soil insects that attack corn in various stages of its growth.

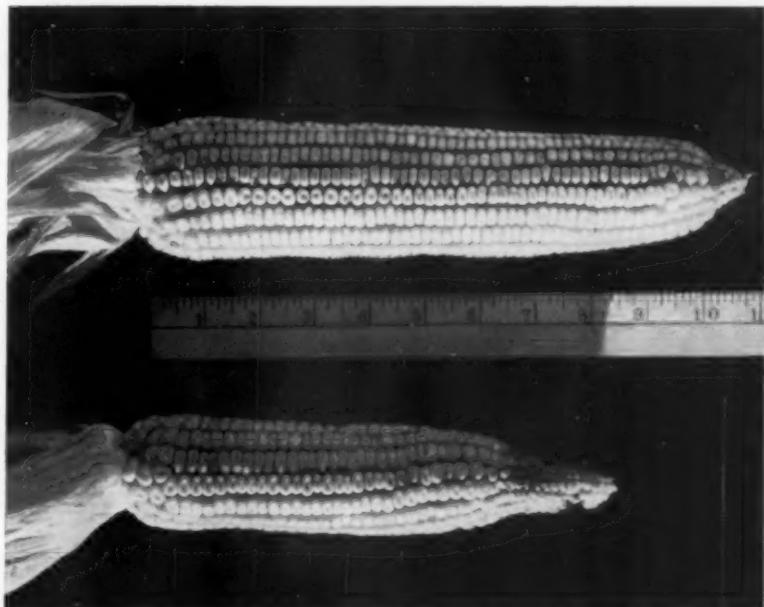
Some of the most destructive are wireworms and seed corn maggots which attack the seed itself. They interfere with germination and are the prime cause of spotty stands.

Wireworms, rootworms and white grubs attack the roots of growing plants. They sap young plants of energy and nourishment essential for productive growth and cause lodging by cutting anchor and feeder roots.

Aldrin controls them all

A single application of aldrin made either as an over-all broadcast treatment before planting or as a row treatment at planting controls all major soil insects attacking corn for an entire growing season.

Aldrin protected corn has consistently averaged a substantial increase over unprotected corn—enough extra to pay for the aldrin application at least three times over.



These two ears came from adjacent rows. The ear at the top from a row protected with aldrin. The ear at the bottom shows typical effects of soil insect activity.

Where soil insect infestations were very severe, aldrin has made the difference between a 50 bushel yield that couldn't even be picked mechanically and a hundred bushel yield standing as straight as an arrow.

Aldrin will insure a better stand, advance maturity date, prevent lodging, cut down disease losses and improve ear quality.

Where to get aldrin

Aldrin is available from your local insecticide dealer under many well-known brand names. It comes in

liquid, wettable powder and granular forms—and in fertilizer mixes.

Whichever formulation you choose, always look for the name *aldrin* on the label or in the ingredient statement.

Shell Chemical Company, Agricultural Chemicals Division, 110 West 51st Street, New York 20, New York.

**Shell
Chemical *SHELL*
Company**

Agricultural Chemicals Division

THE ONE ONLY AND BALER THAT ENDS DAILY GREASING!

Here's the big baler that puts you first in the field—the Massey-Ferguson 10. The baler that's hard at work—and tons ahead—while the others are still being greased. The baler that's got the high capacity to keep you ahead—all day long—with its wide 56-inch pickup . . . smooth, gentle leaf-saving action . . . famous sure-tie knotter . . . and long-lasting factory-sealed bearings throughout! There's never a stop or a slow-down for bearing inspection or grease.

The lubrication is sealed in. All dust and dirt are sealed out. Meanwhile the MF 10 gives you uniform, securely tied bales without a miss. Any length you want from 15" to 50". Any heft up to 65 lbs. For big acreage or family-size farms, here's baling at its all-around best! And it's available with PTO or engine drive, and your choice of easy time payment plans. It's the finest, fastest baler you can buy—the modern, work-saving Massey-Ferguson 10!

